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ABSTRACT

In order of their importance in 1961, the administrative outlets for funds for undergraduates were: colleges and universities (70 percent); the federal government (17 percent), state governments (9 percent), and others. In order of importance as sources of funds for graduate support were: the federal government ($200 million), colleges and universities ($21 million), others ($20 million), and state governments ($10 million). The number of foreign students coming to America with support from public or private agencies in the United States is five times the number of American students going abroad with similar support. State and federal government aid has tended to carry more restrictions for the student than has the same type of aid when offered by private agencies, and financial aid in general has been more restricted for graduate than undergraduate study. Historically, the colleges and universities have played the dominant supportive role for all kinds of student support programs, except for the period of about 10 years after World War II. The states were the first noncollege group to make major efforts in the student aid area; the federal government is only recently a major contributor to these activities. (Author/MSE)

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Student financial aid in the United States: administration and resources

by Rexford G. Moon, Jr.

A report prepared in 1961
for the Economist Intelligence Unit and the
International Study of University Admissions

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Foreword

In a recent essay, Frederick Rudolph, professor of history at Williams College, said, "The diversity of sources of student aid constitutes both one of the delightful wonders and one of the frightening horrors of the prospects for higher education in the United States today."[1] The report which follows, the first of its kind in this country, certainly supports the contention of diversity. In revealing the diversity, it also reveals much not previously known about the strength of our student aid programs and thereby may ease some of the horror, which after all is only a fear reaction to the unknown.

The wonders of diversity in our higher educational activities are reassuring as well as delightful. A diversity which was designed to confuse or to block access to education would be insidious. But no one will argue that the complexity of higher education in the United States has been deliberately devised or that it has the effect of limiting educational opportunity. The nation's motives have been just the opposite. In our enthusiasm we may have created a monster, but it is a benevolent one.

This report was prepared at the request of the International Study of University Admissions, a project sponsored by UNESCO and the International Association of Universities. This document and others dealing with admissions and student aid matters in various countries throughout the world supplied background information for the International Study. I am particularly grateful to Frank Bowles, president of the College Entrance Examination Board and director of the study, for asking me to prepare this report, and for the encouragement he provided in commenting on its first draft.

To the following I am also indebted for their ideas, advice, and leads: Alice M. Rivlin, The Brookings Institution; Peter P. Muirhead, United States Office of Education; John F. Morse, Committee on Education and Labor, United States House of Representatives; Homer D. Babbidge, University of Connecticut; J. Kenneth Little, University of Wisconsin; W. W. Hill, Jr., College Life Insurance Company; James W. Moore, United States Office of Education; Richard A. Humphrey, American Council on Education; John M. Stalnaker, National Merit Scholarship Corporation; and Francis Pray, Council for Financial Aid to Education, Inc. Three persons, Robert K. Hage, Dartmouth College; Douglas Dickson, University of Pennsylvania; and George H. Hanford, College Entrance Examination Board, were particularly helpful in bringing to my attention errors of omission and commission. Over 100 others read the manuscript and their comments, too, have been taken into account. I am deeply appreciative of all these efforts.

Though this report was completed at the end of 1961, it by necessity is based in many instances on information which was at that time already a year or more old. Changes have occurred in the interim of two years, but no major program has gone out of existence,

[1] "The Origins of Student Aid in the United States," in *Student Financial Aid and National Purpose* (New York: College Entrance Examination Board, 1962), p. 10.

while many have grown much larger, and new sources of student aid have appeared. The reader is therefore cautioned that the figures, program by program and in the aggregate, are probably low.

Since many programs of the federal government and of private corporations do not report the number of individuals actually aided, and the amounts received by them, it was necessary to estimate these figures in many instances. In every case in which this was done, the logic of the estimate is presented.

Because this document represents the first effort of its kind, it suffers from problems not unlike those of other "firsts." Just as the Wright brothers first soared aloft in a machine most unstable when compared to modern craft, so this study, representing a first attempt at viewing a great deal of new ground from above, may well be replaced, and soon, by more sustained and powerful efforts. Hopefully, it will, for it is at best a somewhat precarious description of only one point in time. As we know in education, there is nothing which is less accurately descriptive of the future or the past than the present. Continual updating of this report is a worthy cause and a large challenge. I hope others will accept it.

Rexford G. Moon, Jr.

December 1962

Introduction: an overview

No nation puts more stock in maximum college attendance by its youth than does the United States, yet no nation expects those receiving higher education to pay a greater share of its cost. Herein lies one of the paradoxes of higher education in the United States. Though it is not the purpose of this report to argue the rightness or wrongness of this practice, this fact of life must be recognized as directly or indirectly responsible for much of the student aid activity in this country. An over-all description of this activity is the subject of this report.

A great variety of programs has been developed to assist the individual with the various expenses of higher education. This is because much of this education either costs the student considerable money, as is the case with most undergraduate and full-time graduate education; or causes the recipient of various types of specialized education or postgraduate training to lose time from gainful employment and therefore, to require reimbursement or subsidy.

Though most of the nation's student aid efforts have as their most important consequence the reduction of educational costs to the individual, no such singleness of purpose characterizes the many programs of aid this report describes. For example, student aid in various forms has come to be accepted as a way by which government may indirectly support educational institutions, public or private, and a sizable amount of this is being done. Various student aids have been used successfully for generations to recruit young people into certain professions, particular colleges, industries, programs of study, or government service, and so on. As a public relations device, its assets are known by both labor and management as well as by civic and philanthropic groups. The needs of young people and their parents for help with the expenses of higher education are even being capitalized on by major commercial money sources, so that we may say there is even a profit motive connected with some efforts to assist with educational expenses. The use of grants to support the retraining or upgrading of individuals, particularly in the teaching professions, government service, and the health sciences, though a new practice, probably had its origin in the vast and more general programs for veterans in the late 1940's and early 1950's. The primary purpose of these programs had been to help a large number of young men readjust themselves to a changing society. Also, as our nation has become increasingly conscious of our educational responsibilities to other nations of the world, the usefulness of student financial aid as a tool of international politics has not escaped our notice. The evidence is clear: we have in recent years found student financial aid in its many forms to be useful as educational, social, economic, and political tools.

There are a whole host of student financial aid matters with which educational institutions and other aid sponsors are now concerned in the United States. Student financial aid has been with us since the origin of these institutions. But its contribution to the furtherance of education of large numbers of young people was perhaps of little conse-

quence or interest except locally, until we saw what massive student subvention could do to support colleges and promote college attendance right after World War II. Since that period, when over half of American college students had practically all their costs paid for, we seem to have been struggling through a great variety of far more complicated and specialized means of financial aid and have accomplished only part of the successes of that period.

The issues and problems of the day surrounding the totality of our student-support efforts result in part from the diversity of agencies supporting these activities—educational institutions, corporations, state governments, the federal government, and untold numbers of local civic and philanthropic groups. Also, the diversity of purpose of these agencies as well as of their financial aid programs, the magnitude of the amounts of money involved, the educational institutional rivalries fostered, and the diversity of resources considered in this country to be student aids (jobs, loans, scholarships, fellowships, assistantships, subsistence grants, and so forth), have all contributed their fair share in producing this complex picture of financial assistance in the United States—both its administration and resources.

Since in the final analysis the purpose of any student aid is to encourage and make possible college attendance in some form or other by the recipient, and since the college is usually the major supplier and administrator of funds, the college becomes the major focus of the many problems and challenges attendant upon such a large enterprise. Here, in and around the colleges, we can best study the issues and problems emerging from our many aid efforts. From an examination of some of these we can perhaps gain a better general picture of what has been and is being accomplished and in what direction we seem to be moving in our efforts to equalize educational opportunity in this country.

Since our sources of aid are scattered, the purposes different, and the demand great, it is not surprising that one major problem is found in efforts to provide information about aid resources, requirements, and so forth, to the potential college-going public. The public is confused by the bureaucracy which has grown up in and out of the colleges for the dispersal of financial aid. The techniques, procedures, policies, and resources of one college, even when well described by that college, are at best confusing, and to a considerable extent different from those of other colleges. The costs of education vary greatly and are not always accurately presented in the wealth of educational literature. Much of the information that gets into print about college costs is incomplete, and usually out of date in short order because of continually rising costs.

Colleges, the largest single source of financial aid for graduate and undergraduate students, are sensitive about sharing with the public information concerning the inner workings of their aid programs. This is in part because the colleges cannot always predict what they will do because of changing standards or resources, and in part because some information probably must remain confidential. More has to be done in the way of general information about available aids, if the colleges are to make a significant contribution to the furtherance of national purpose, not just to narrow institutional aims.

Low-interest, long-term loans administered by colleges and reserved for needy students now constitute the major outside method of support used by undergraduate students. The growth in loan use in five years has been phenomenal. The dispersal of funds and attendant record-keeping have, however, placed a sizable clerical burden on the colleges. Yet to be faced by hundreds and hundreds of colleges

is the even more serious matter of loan collections. The diligence with which loan collections are pursued and the success realized, to be determined in the next few years, may decide whether, and how much longer, this activity can and should remain a responsibility of the colleges. Certainly the program of loans supported by the federal government has brought a great deal of consistency into the college loan market and must be credited with sparking the creation of more loan resources of various kinds by states, private firms, and major commercial money sources. The personal material gain to the individual which presumably is related to a college education has been one of the major arguments used in favor of loans for students. This has not, however, convinced graduate schools or their students that borrowing is appropriate for them.

The introduction of large loan funds reserved for needy students has speeded up, if not completely precipitated, the internal coordination of financial aid administration for undergraduates by the colleges. It is still a challenge which many institutions have yet to face squarely. The larger institutions and some small institutions with large aid expenditures are now increasingly aware of the desirability of doing this. Bringing together in one office the dispersal of scholarships, on-campus jobs, and loans adds immensely to the institution's flexibility in aiding any one student. External pressures, such as work with the federal and state governments, the rise in privately sponsored programs, the increased demands for assistance by students, the growth in special services and techniques, and the diversity in financial aid funds have also accelerated moves by colleges toward consolidation of student aid. Institutions engaged in any kind of advanced planning at all have certainly recognized the desirability of establishing this kind of central service in their institutions. At the graduate level, however, student aid services are still widely scattered through various graduate colleges and departments of the institution, and in some instances are even under the control of individual faculty members. It is quite possible that some of the problems of inequities and interinstitutional competition could be better regulated if aid services were more centralized, at least in the major institutions offering graduate work.

Many outside influences and demands on the institution come to focus in the financial aid office or are a by-product of the institution's student aid activities. The federal government provides funds for loans, fellowships, and subsistence grants, and expects various degrees of support from colleges in administration of these funds. Most states have some kinds of programs, many of which produce demands on the institutions for administrative services, record-keeping, or reports of student progress. For example, in connection with the Scholar Incentive Program in New York State, the clerical work by the colleges will be sizable because this program affects virtually every New York State student attending a college in the state at the graduate or undergraduate level. Then, too, corporations with programs of various types ask help from the colleges, and many secondary schools want reports. The differences in information needs, requirements, schedules, and sums awarded all make for confusion. The financial aid officer has to handle many of these problems, which are of growing concern to the institutions. It is through such outside pressures just described that not only is extra work generated, but undesirable influence and control is exerted on the colleges. Colleges need to be alert to the possibilities and to band together to maintain consistency in the face of the demands made by external forces.

Since students who attend colleges and universities and/or their parents are expected

to pay a share of the cost of their education, it is not unusual that there is more than just academic interest in how much people will pay for their children's education and in the attendant problem of the measurement of their need for financial help. Some colleges are now beginning to wonder, as the number of applications seems to be leveling off, particularly at the more expensive institutions, whether they have perhaps reached, for the time being anyway, an upper limit for tuition pricing. Since at some of these institutions the average annual costs may be equal to, or larger than, half the average annual family income in the United States, this concern is probably not unfounded, (annual family income is now almost $6,000). No matter how large and visible the scholarship program may be, if the college costs seem exorbitantly high, even the most affluent of families are going to think twice before moving in the direction of that college. It can be said, for obvious reasons, that the more expensive the institution, the more visible and well understood by the public must be its policies and resources, if the institution hopes to attract any sort of socio-economic cross section of the college-going public.

Quite a science and ritual has developed in connection with estimating a family's ability to pay for college, most of it associated with undergraduate education. The standards generally agreed upon around the country are remarkably similar. There is not, however, any one standard required or imposed upon institutions, states, or other awarding agencies. The use of one or another need-evaluation system is purely voluntary. Most systems expect parental support from income and assets. The student, too, is expected to have savings from previous work. Most systems owe their origin to the work of the College Scholarship Service, an activity of the College Entrance Examination Board. Where there are differences of emphasis on factors in the measurement of need, the results of these differences as expectations of payment from the family are usually minor.

It should, however, be made clear that excellence or promise of some sort determines which students will be aided; "need" is used largely to determine the size of the awards. Need assessment is not new in student financial aid work. There is, however, new emphasis on it, not only in awarding scholarships, but in connection with on-campus jobs and loans as well. Colleges feel that the resulting benefits of consistency for the colleges and fairness to the students and parents have been well worth the added expense and effort required of students, parents, colleges, and schools. In contrast to undergraduate colleges where most student aid is "need-based," at the graduate level need rarely enters into aid decisions. This distinction applies generally also to programs administered by states, the federal government, and corporations.

For those whom it aids, the undergraduate colleges have essentially three forms of aid—jobs, scholarships, and loans. It is accepted policy now to "package" or combine these aid forms, but there, to a considerable extent, the similarity among institutions stops. In other words, from one college to the next, there is no consistent or predictable answer to the question of which student gets what aid and how much. Some colleges may give only jobs and scholarships in combination; some only loans and scholarships, others, just scholarships. Some vary the amounts of the components of these combinations with the excellence of the student—the higher the promise, the higher the scholarship part of a package, within, of course, the range of need demonstrated by the student. Here is a potential source of confusion, for even though the colleges may arrive at reasonably similar need figures, the offers of aid, although possibly identical in

total amount, could be quite different in their make-up. Since there is a sizable amount of multiple applications to colleges in this country, the possibilities for serious competitive overtones are only too clear. Where the degree of overlap in applications is high, some colleges may actually consult with one another in advance of making awards. This helps to a considerable degree in controlling the situation.

Illustrative of this practive are the following figures. In 1960 the eight Ivy League colleges made *in toto* 3,167 offers of aid to entering students. It is not known how many of these represented multiple offers to the same individual. However, only 25 per cent of the total offers of aid were single offers (scholarship, job, or loan); of this total, 22 per cent were scholarships only. In other words, 75 per cent of the offers consisted of some combination of financial aid—scholarships and loans, scholarships and jobs, jobs and loans, or all three. As an aside, the importance of loans is worthy of note; 62 per cent of the total number of awards contained a loan offer with some other aid form.[1]

These figures illustrate also a high degree of loan activity present in the colleges, and that loans are almost always used in combination with either a scholarship or a job, or as an optional alternative to a job— facts interesting in themselves. They don't tell the full story of the potential for confusion and competition, however, which is found in the range of the mixture of some of these combinations across the eight institutions. For example, though *in toto* the most popular aid form was a package of scholarship, job, and/or loan (representing 42 per cent of the offers), this combination represented only 3 per cent of the total offers in one institution and 80 per cent in another. Scholarships alone were 80 per cent of the offers in one institution and only 2 per cent of the offers in another.

Though most colleges carry on very active recruiting programs, there is much conjecture as to the purpose of these efforts and what they accomplish, and the role of student aid resources in this regard. A matter of no small importance at this time is the extent to which colleges have a responsibility to promote college attendance among culturally and/or educationally deprived youngsters. Some argue that the colleges' aid funds exist essentially for this purpose. Most, though tending to agree with this idea in principle, find it difficult to carry out in practice. Studies continue to show that aid-holders come largely from the middle class. Therefore, it is not surprising for people to say that student aids received affect only choice of college and not whether or not the recipient of the aid will attend college in the first place. The nurturing of talented youngsters from deprived surroundings cannot be carried to full success without student aid. On the other hand, to expect student aid to accomplish major successes without more prolonged and planned action is probably underestimating the complexity of the problem.

Educational loan programs sponsored by commercial banks and finance companies are growing in number and activity. These programs, though offering the family an opportunity to stretch the payments for their children's education over a period considerably longer than the four college years, exact for this privilege substantial interest and other charges from borrowers. There is considerable confusion and misleading information about this. As desirable as we may believe it is for people to pay a substantial share of the cost of their children's education, it is a moot question as to whether they should have to pay considerably more (because of high interest

[1] Figures obtained from the 1960 Consolidated Reports of member colleges to the College Scholarship Service.

rates) if they do not have cash in hand. Certainly it seems wrong to burden the families of students for whom a loan or some other form of financial aid is an absolute necessity with loans with high carrying costs. On the other hand, loan charges for families who borrow largely for convenience should perhaps reflect the interest customarily levied in loans for luxury items.

Debate grows concerning the aid activities in our graduate and professional schools. At present there is a high degree of financial support for students in the form of assistantships (jobs) and fellowships. Considerable competition exists among graduate schools for good students and offers of substantial sums to ease student costs are not infrequent. Some directors of financial aid would like the principles of aid administration used at the undergraduate level to be applied here as well. Opponents of this idea, who seem at the moment to represent the vast majority, believe that even if the competition itself is bad, the results are not disastrous. The greatest concern is over whether there is enough money for certain subject fields as compared with others. It is doubtful, in view of different traditions, national needs, and competition, plus other unique characteristics of graduate programs and their administration, that undergraduate financial aid practices and philosophies would ever catch on. In fact, graduate education probably should be completely subsidized, a state which is not too far removed from the present. If any control on the competition is possible, it should be exercised through voluntary agreements on mutual offers to candidates through advanced consultation.

Though sympathetic to the ideals supporting international student exchange, financial aid officers are increasingly frustrated by the problems presented to them by certain of the mechanics surrounding the handling of the aid needs of foreign students. Many students come to this country only partly aided or completely aided for brief periods. Eventually the student wishes to remain longer or requires more aid; here the problems begin. Most foreign students expect a higher amount of aid than is possible in this country. Also, they find certain types of aid upon which we depend heavily (for example, loans) not to their liking. In turn, we find it difficult to loan money to foreign students. The repayment problems may be considerable once the student returns to his own land.

The exchange of foreign students is, as we have discovered along with the other great powers, a most worthwhile undertaking with significant political, social, and economic ramifications. Much of the burden of aiding foreign students still falls upon the colleges —financially and administratively. With the resources at their command and the philosophies under which they must operate, colleges are having trouble carrying out this important job. More money, either in the hands of the foreign students when they arrive or allocated for them in the financial aid offices of colleges, would be a real help.

A unique American educational development is the community college or public junior college. These two-year institutions will absorb much of the increased student enrollment of the next decade and longer; many students will attend them to avoid the higher costs of the first two years in a four-year college. Most of our senior colleges, however, do not have the necessary funds or the financial aid policies to make it possible for them to aid graduates of these community junior colleges. This is unfortunate, for these two-year institutions will certainly uncover good talent. They may actually represent in many ways the equivalent of the GI Bill of the late 1940's in their potential for completely democratizing higher education. Students,

after finishing at these institutions, will need an outlet in a four-year institution if the community college is to achieve its full purpose. There is need for some rethinking by the college people as to where and whether they will find the funds and how they can modify their policies to make such assistance possible.

Financial aid activities in the United States, representing as they do the purposes and interests of many different groups and organizations—some actually in opposition to each other—are therefore difficult to evaluate. This is due in part to the fact that little if any evaluation of individual aid efforts, let alone of the total, has been done. This report represents the first attempt at any totally descriptive, let alone evaluative, effort. It is, of course, the fact that higher education is itself diversely directed and multiple-controlled that makes for much of the seeming disjointedness of our aid efforts. Often these efforts in their various forms tend directly or indirectly to support the major policies and purposes of their sponsors. Suffice it to say, that in spite of the large efforts, we in this country find, to our great frustration, that large numbers of our able students still do not attend college, and that shortages of well-trained doctors, teachers, and so forth still plague us. The remedy of both of these situations depends in part on our student aid efforts; their very existence at present indicates a degree of inadequacy in our student support efforts.

There isn't any question that each year there has been a slight increase over the previous year in the number of persons aided directly with the expenses of their education. Shortly after World War II over half the full-time students were being aided by various veterans' programs. We have still a great distance to go before we reach this point, again, but we seem to be working in the general direction, although through more diverse efforts and complicated means than these veterans' programs represented.

It is still very unsettled as to whether, in the future, higher education in the United States will be either costly or free. It is probably safe to say that neither is possible.

There will continue to be very costly institutions handling, relatively speaking, very few students. The moderately expensive institutions, characterized now by the land-grant colleges, again relatively speaking, will handle many more students than the expensive ones, but by no means all the rest. Holding a significant place will be the municipal institutions, community colleges, and so forth, which as a type, will educate the largest number of students. In this last category, the need for student aid will be small or nonexistent. Since eventually over half the college students in the United States may attend this type of institution, we might say, theoretically anyway, that only half our students over the long run may ever need to be subsidized. The expensive institutions already have well-defined, even if not adequately financed, aid programs. The medium-priced institutions (land-grant, state) are psychologically, if not actually, out of the reach of many. These institutions, generally speaking, have the lowest aid per student and the most rigid standards governing administration of aid. They could become, in view of this, as restrictive in their socioeconomic make-up, or even more restrictive than the more expensive colleges which have far more flexible aid policies and procedures to combat their problem of higher costs.

In recent years, the trend toward increased support for those in certain crucial professions who would like, need, or desire to increase their training has been marked. These supports have come largely from federal sources. This form of aid, though not considered by many as student aid, is such in its broadest

sense. It serves to return to college, people who—at least according to an ideal—probably had to terminate their education before they should have (teachers) or actually sends individuals to college who might not otherwise have gone (certain employees of government or private industry). These are certainly, in the American sense anyway, widely accepted as aid purposes. The fact that certain of these efforts of an in-service nature are required "after the fact" may be further evidence of certain limitations in our total financial aid activities.

Student financial aid in the United States is a dynamic activity. Increasingly its changing pattern tends to reflect national concerns of long-range national and international consequence. We may from this conclude that even if national planning has not yet taken hold of our aid efforts, national concerns seem to be exerting their influence in the conduct of existing activities and the creation by private and public groups of new activities.

Totally, our annual efforts for the direct support of students are staggering in terms of the dollars involved, the numbers being helped, the problems encompassed, and the number of agencies and organizations participating. One may view these efforts as disparate and uncoordinated, and thereby condemn them without understanding that the strength and success of American education rests on its diversity and multiplicity of support. Our student aid activities, as a tool of such a system, mirror its strengths and weaknesses, and cannot be expected to do otherwise. National planning and national efforts are possible in the student aid area; ideally these can be achieved through cooperation and coordination of the many efforts and agencies now active in this field, not through their replacement by a single system or agency.

Financial aid activities by colleges and universities for undergraduates

There are now some 2,000 educational institutions in the United States which are classified as colleges or universities. Over 600 of these are two-year institutions of the junior college or community college type. Most institutions support from institutional funds some kind of student financial aid program for undergraduates. In 1959-60, 1,755 institutions, representing 90 per cent of the institutions of higher education, with 95 per cent of the enrollment, reported some type of financial aid program for undergraduates (Mattingly, 1962). There is great variation among the institutions in the amount and types of funds available per student and in the specific financial aid policies governing the award of funds. These variations reflect tremendous differences in institutional size, educational purpose, economic strength, form of support, costs, educational strength, and other policies or characteristics of the institutions, themselves.

Colleges and universities are still the principle source of student financial assistance funds for undergraduate study in the United States. Though many other agencies and organizations, including the federal and state governments and private corporations, foundations, and civic groups, support student aid programs, the sum total of these efforts on behalf of undergraduates does not, though sizable, equal the expenditure by colleges and universities for this purpose. Also, because the colleges are the independent administering agents for certain outside-supported programs, their already dominant position is further enhanced. It is therefore important to examine in some detail the role of higher educational institutions in the provision for, and awarding of, student aid funds. In this respect the American higher education scene is different from that of most other countries in the world today.

Early history

The earliest student financial aid efforts in the United States, which were completely centered in the colleges and maintained by them almost completely out of their current income, served two purposes. First, they were purposely aimed at assuring a modest representation of impecunious students in a student body largely composed of only the affluent class. This was done quite intentionally to protect the college from undue criticism for snobbishness. Second, these funds provided a means by which colleges could attract a sufficient number of students to keep themselves in operation, though in so doing they often jeopardized their already shaky financial position (Rudolph). By the earliest part of this century more specific purposes were being stated and served by aid programs. Colleges were accepting funds or creating their own funds through remissions of fees and tuitions to assure broad geographic and athletic representation, and to promote the inclusion in the student body of individuals who met certain educational, social, political, or regional interest patterns which the institution, or its benefactors, wished to foster. During the latter part of the nineteenth and the

early part of the twentieth century, sizable funds for scholarships were established at the colleges, usually by individual gifts.

Much of the early history of financial aid in America took place in the so-called private colleges and universities which, until as recently as two or three years ago, enrolled over 50 per cent of the full-time college students. (These institutions today still have the highest average dollar support per student in financial aid funds.) The publicly supported institutions, which purposely kept their costs low, received less and needed less in aid funds than the much more expensive private institutions. Though there still is today quite a dollar difference between the cost at a typical private institution ($2,500) versus a typical public institution ($1,500), the cost at a public institution relative to the annual income of the average American family ($6,000) is still considerable. A substantial growth in aid funds and expenditures at public institutions is taking place, and programs which have come into being in recent years and which account for much of the increase in funds available (in other words, state programs, corporate programs, federal programs) have been equally accessible to students attending public or private institutions.

The earliest form of assistance given by colleges and universities, though usually called scholarships, was achieved by the simple remission of tuition fees and other charges. Later, current gifts as well as earnings on specific endowed funds were important sources to the colleges for aid funds. Today, the commitment of unrestricted income (or remission of fees) certainly provides the bulk of funds provided by colleges. Studies have shown that, on the average, 10 per cent of income from tuition and fees goes into student aid; in some institutions the proportion of income may be as high as 30 per cent (National Federation of College and University Business Officers Associations).

College-supported aid funds today

Expenditures for student aid, though present in almost every institution, are really concentrated to quite a degree in a few institutions. A recent study (Holland and Kent) shows that 50 institutions, or less than 3 per cent of the colleges in the nation, enrolling less than 15 per cent of the full-time undergraduates, control about 35 per cent of the scholarship funds awarded by colleges and universities. Though these are not, in every case, the most expensive institutions in the United States, most of the colleges and universities in this group would be considered so; a few are present only because of their sheer size. The expenditures for student aid tend, of

Table 1. Financial aid to undergraduates by colleges and universities

	1934–35		*1949–50*		*1955–56*		*1959–60*	
	Number of awards	*Total Value*	*Number of awards*	*Total Value*	*Number of awards*	*Total Value*	*Number of awards*	*Total Value*
Scholarships	66,708	$8,863,000	124,223	$27,000,000	237,370	$65,732,000	288,521	$98,000,000
Loans . . .	*	*	*	*	77,107	12,463,000	56,432	14,800,000
Employment	*	*	*	*	288,479	65,932,000	347,678	98,900,000
Total . . .	*	*	*	*	602,956	144,132,000	692,631	210,900,000

*Data not available for these years.
Sources: (Mattingly, 1962; Ratcliffe; Wilkins, 1958; Wilkins, 1954).

course, to relate themselves somewhat to the total cost of the institution to the student; high cost is associated with high average dollar expenditure per student for aid and low cost with low average dollar expenditure per student. Here again, the American scene is unique because of the range in the costs of attending higher institutions.

Table 1 presents the three types and amounts of student aid expenditures made by American colleges from their own funds over the last 27 years. During approximately this same period of time, tuition and fees increased 187 per cent in small public institutions and as much as 354 per cent in the medium-sized private institutions (West) — the type of institution, incidentally, in which much of the concentration of funds previously mentioned takes place. Enrollment during this same period increased about 245 per cent for all types of institutions, with substantially less of an increase in the private institutions in which the college-supported aid funds are concentrated. Though enrollment increases have certainly been one of the factors for increases in aid expenditures, the sharp rise in costs — two-thirds in the last 12 years — must be given the major credit for these sizable rises. Though the United States has experienced relative prosperity since World War II, with a resultant substantial increase in the number of middle-income wage earners, the personal income increases have been largely balanced off by rising living costs. Nonetheless, the aspiration for college in the population has grown more in keeping with the increase in the middle-income group than in relation to their ability to pay for college.

The strain on college-supported aid funds can be documented. In 1955–56, $65,731,950 in scholarships were given by our colleges to 237,370 undergraduate students. In 1959–60, the sum of money had increased to $98 million with 288,521 students being aided. In 1955–56, students aided by scholarships from college funds represented about 14 per cent of the full-time undergraduate enrollment; by 1959–60, though the number had increased, the percentage had declined to 11 per cent. During that period there were increases in college tuition ranging from a low of 22 per cent at small public institutions to a high of 42 per cent at large private institutions. During this period of five years, median tuition cost increased by about 30 per cent (West, 1961) and college scholarship funds increased 50 per cent. At the same time, however, the total number of students receiving scholarship aid from college funds declined by 3 per cent.

During the same period of time, college-controlled employment opportunities were growing in number and dollar value but also declining in their effectiveness. In 1955–56, 288,479 undergraduates received $65,931,915 in college-controlled jobs. (The similarity between the dollar figure for scholarships and jobs is interesting but probably fortuitous.) In 1959–60, 347,678 students had jobs valued at $98.9 million. In 1955–56, about 16 per cent of the enrolled students had jobs from college sources; in 1959–60, the number had declined to 14 per cent of the total enrollment. The pattern with loans from college funds, alone, which are really insignificant now, is similar.

New management techniques

An increased concern in American colleges over the economical management of the educational process has led to a number of changes in institutional management techniques from which the administration of scholarship and other student aids has benefited, particularly since World War II. Also, changes external to the institutions have forced, urged, or encouraged changes in the student aid administration policies, as well as practices, of institutions. The two GI Bills, the growth in corporate programs, the intro-

duction of the College Scholarship Service, and most recently the National Defense Education Act loan program, are just some of the outside influences which coupled with internal changes to bring about the refinements found today. The most outstanding is the centralization of student aid administration in one or two offices even in the most complex institutions.

Policies and procedures adopted over the past 10 years have brought about changes within the colleges; the significance of these changes may be considered as great as the growth in size and scope of financial aid funds over recent years. Many, many student aid offices have been created with full-time staffs —some even in institutions of fewer than 1,000 students. Colleges collect extensive data on the financial circumstances of students and their parents, an activity which six or seven years ago was considered highly improper. In the awarding of aid funds, very careful consideration is given to the needs of the student and his parents for help. There are exceptions to this, but they are not significant in the aggregate, though they may be at certain institutions. Special testing beyond that required of students for admission is rare. Usually those aid applicants who are judged ablest by admissions standards are given consideration. The best students of this group receive aid of some kind based on their need.

Combined forms of aid

In searching for ways to extend existing resources or to create new resources to help students meet rising educational costs, colleges have increasingly resorted to awarding aid to individual students in two or three forms— scholarship and job, scholarship and loan, some other combination of two or three of these, and in rare instances a combination of all three. Table 1 (page 10) shows the extent to which student employment is as important a resource for student assistance as are scholarships. In this regard it should be noted that these figures represent only the student employment provided by colleges to students during the academic year as a form of financial aid. Most college students earn through term-time or summer employment some part of their expenses. The value of this massive student work effort has never been estimated, nor would its inclusion be relevant in this study. The true picture, as far as college loans are concerned, actually is not clear from this table since federal government funds under the National Defense Education Act, which amount to $90 million a year now, are not shown. Scholarships which are, in most countries of the world, the principal, if not the only, form of student assistance administered by colleges or other authorities do not, as one can see, have the same relative importance in the United States, at least for the support of undergraduate study.

Most funds used by colleges for scholarship purposes in the United States are unrestricted. In addition, the colleges which are in a position to impose restrictions of various kinds do not do so with any consistency which would make description possible. In some years a college may spend considerable funds in the support of science awards, and in another year for the support of studies in the arts. The Office of Education 10 years ago stopped collecting information about undergraduate awards by fields. Restricted college funds, when they do exist at an institution, are generally of two types: earnings on endowments, set up for the most part in the late nineteenth and early twentieth centuries with varying restrictions, which today are small in their dollar value, and gifts to the colleges from state or local governments or from private sources to support various courses of study (for example, teachers' education). These latter funds are usually considered as

part of the colleges' funds since the administration is completely theirs, although the conditions of the awards made from them may have been externally specified.

Loans and employment, in terms of conduct and by definition, are considered student aids in the United States. Since preference is most often given to needy students in awarding these aids, and since the terms of both are tailored to the activities and needs of the student, both (in the American tradition) belong properly in this discussion as student financial aids.

About 10 per cent of the students in American colleges receive aid from college scholarship funds. This does not, however, tell the story at each and every institution. In some colleges as many as 40 per cent of the students may have scholarship aid, which may be due to large scholarship funds at the college or because of the aid brought by the students from outside sources (Little, 1959). Most studies of the sources of funds which families draw upon to assist with college expenses (Hollis *et al*,; Lansing, Lorimer, and Moriguchi; Moon) indicate that about one-quarter of college undergraduates hold some kind of scholarship during some part of their college career.

Aid for graduate students by colleges, universities, and nongovernmental organizations

It is generally recognized that most of the postbaccalaureate study in America (excluding professional study in the fields of medicine, law, and dentistry) is still done in less than 100 universities. As far back as 1955–56, when the last comprehensive study of university-administered graduate aid was done (Mattingly, 1957), 406 institutions had aid programs for graduate students providing fellowships, research or teaching assistantships, or loans. For that year, 330 institutions offered fellowships, with or without additional forms of aid, whereas in 1949–50 only 265 institutions offered fellowships (Wilkins, 1954).

The three basic forms of aid for graduate students have fairly well-agreed-upon definitions. Fellowships are grants of money or credits against charges given usually to students working toward a graduate degree or doing postdoctoral work, for which service or repayment is not expected. The fellowship is used particularly to allow the student time for thesis research. Only in rare instances does need play a part in these awards. Assistantships may provide either cash or credit against bills in payment for services rendered. Most often assistantships reimburse graduate students for teaching or research activities. Loans require repayment of all or some part of a sum advanced to the student or credited to his bills. The period of repayment usually doesn't start until completion of training and may be stretched over a number of years.

Most studies of graduate student aid fail to make clear distinctions between aid given by the institution out of its own funds and aid awarded by it from other sources. In 1949–50, of the money used exclusively for fellowships and administered by colleges, 19.5 per cent came from the states, 1.4 per cent from local government funds, 19.3 per cent from endowment earnings, 24 per cent from gifts, and 36 per cent from unrestricted income (Wilkins, 1954). In that year there were virtually no federal programs for graduate students. Also, many of the students were still receiving support through the GI Bills. Fellowships worth $9,266,965 supported 13,659 students. By 1955–56, the number of fellowships awarded by colleges had grown to 24,885, and they where worth $18,239,150, a doubling in dollars given and almost a doubling in numbers aided (Mattingly, 1957). In 1959–60, 139 institutions offering the doctor's degree were studied (considerably fewer institutions than were studied earlier) and statistics showed that, over-all, they gave $35,040,578 in fellowships to 20,811 students; from institutional funds, alone, they awarded $20,890,116 to 15,215 students.

It has also been shown (Mattingly, 1958) that between 1955 and 1959 there was a growth of about 25 per cent in fellowship aid administered by all institutions. Assuming this percentage of growth to hold for all institutions, the amount of fellowship awards made by institutions in 1959–60 could be estimated at something under $40 million. Most studies in this field do not have common bases, so any attempts to compare data from year to year can lead to seriously incorrect conclusions. It is therefore virtually impossible

to show any meaningful trends over the years.

As of 1959–60, it appeared that about 50 per cent of the predoctoral fellowships were supported or largely controlled by universities; another 26 per cent were provided by government sources; 14 per cent, by foundations; and the balance, by miscellaneous sources. In the United States the specialized support of certain study fields does not start until the graduate level, but at that level virtually all student-support programs can be identified as supporting training in one subject field or another. Though a pattern of support exists, it was in no sense planned. From the data available (Chase) these generalizations may be made:

1. For every subject-matter field,[1] university funds or university-controlled funds provided the greatest number of fellowships; *in toto*, 60 per cent.

2. Fellowships from private foundations are concentrated in the humanities and social studies, but their impact, which is only 14 per cent of the total predoctoral fellowships, is therefore small.

3. Support from the government goes largely into engineering and the biological and physical sciences. In fact, 72 per cent of the government awards are in these three areas—63 per cent in the physical and biological sciences, alone.

4. From all sources *in toto*, engineering receives 12 per cent, physical sciences, 28.8 per cent; biological sciences, 18.8 per cent; social sciences, 18.8 per cent; humanities, 15.8 per cent; education, 5 per cent; and others, 0.8 per cent.

5. Though data are not currently available on the dollar value of teaching or research assistantships—nor is the information good on the number of students involved—it is safe to estimate that most of these are in the science area, since they are supported usually as a result of research grants to the institution. Much of this money is, of course, from government sources in the areas of defense and health sciences. If one adds to this the information available about fellowships, the lopsided support of graduate education in the sciences emerges clearly.

The largest noninstitutional, nongovernmental fellowship program now operating is sponsored by the Woodrow Wilson Foundation. This program was set up largely to draw attention to, and to counteract, two problems in graduate education; the need to train more college teachers and the need for greater student-aid support in the humanities and social sciences. Though awarded for one year only and carrying a stipend of $1,500, the award is highly coveted by graduate students.[2] Since the program enlists many faculties throughout the country in the recruitment and selection of fellows, it is, no doubt, doing a great deal to excite students toward graduate study. The program has been in existence since 1957, and 1,000 new fellows are picked each year. Eighty per cent of the fellows continue into the second year of graduate work. Like almost every other fellowship or assistantship program in the United States, need is not a factor in making the award. Students may take awards to any institution they please, providing it is not the institution they attended as undergraduates. Since only 9.7 per cent of the most recent winners chose to study science (the balance are studying in the social studies and the humanities), it may, by this, be assumed that the program is certainly achieving its stated purpose (Woodrow Wilson National Fellowship Foundation).

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[1] Engineering, physical sciences, biological sciences, social sciences, humanities, education, and others.

[2] Late in 1962, the Woodrow Wilson Fund announced plans for a small program to continue support of some graduate students beyond one year of study.

The principles and policies guiding the complex of graduate aid offerings in the United States, if there are any, are difficult to identify. Certainly the emphasis is upon supporting excellence, and virtually no attention is paid to the question of need of the student for aid. Loans are available but are not popular. The fact that over 70 per cent of the graduate students have either fellowship or assistantship-type stipends is significant. About half of these awards are of the fellowship type. Teaching assistantships are twice as frequent as research ones (Davis, 1961). There is currently some interest being shown by a few educators in making wider use of the "need" idea at the graduate level. It seems unlikely that this will meet with much success. Graduate education in the United States seems to be moving, and quite rapidly at that, in the direction of almost complete stipend support for the graduate student. At the present time, stipends are the principal source of financial support for graduate students, whereas, for undergraduates and students in professional schools, parents' contributions still provide the major portion of student support. (Lansing, 1960). There has been, as the previous pages indicate, a one-sidedness to the support provided, though recent efforts have been directed toward correcting this imbalance or, at least, in calling its existence to everyone's attention. It is unlikely that much will be done to correct this imbalance over the next few years.

Student aid programs of the federal government

The federal government, through its many departments, agencies, and bureaus, provides funds which directly or indirectly support many different kinds of student financial assistance programs. Generally speaking, most federal programs have been formulated to meet specific national needs for trained personnel in various fields. The variety of government agencies involved, the differences in instructional approaches in various fields, plus the fact that each agency maintains its own contacts and establishes its own policies, usually with each educational institution in its program—all have combined to produce extremes in variation which challenge description. To say that the administration of federal programs is uncoordinated significantly understates the case.

Of the 2,000 institutions of higher learning in the United States, it is estimated that all but about 400 are participating in some way or other in one or more federally sponsored student aid programs (Little, 1961). Over 90 per cent of the enrolled students are in the participating institutions. Federal programs provide aid in a variety of forms. These include loans for graduates and undergraduates; special educational and subsistence grants for veterans or their orphans; fellowships in science, mathematics, or foreign language; assistantships derived from research or training programs; scholarships for teachers attending institutes in science, foreign language, or guidance; aid for exchange students from other countries; ROTC programs; further training for military or civilian employees of federal departments; and traineeships, mainly in the health sciences, for doctors, nurses, and other medical personnel.

There is much discussion in the United States at this time about the role and responsibility of the federal government in the nurture and support of higher education. While these discussions proceed without reaching specific conclusions, the activities of the government grow and higher education becomes increasingly dependent upon them. This is true of student aid programs as well as of other support programs. Though efforts to increase significantly the supportive role of the federal government in higher education were not successful in the last Congress, these proposals were definitely supported in principle by leaders in higher education. Concerns, when expressed, were generally about the adequacy of the sums involved or the administrative procedures to be followed. Among these proposals was one for a federal scholarship program of some magnitude.

National Youth Administration and Student War Loans Program

The federal government's support of higher education dates back over a century, and from its beginning this support indirectly aided in holding down costs of education, but the first direct federal student aid effort of any significance did not take place until the Depression of the 1930's. Under the National Youth Administration, funds were allocated to colleges on a quota basis to support student work programs. During the 10 years of its operation, some 600,000 students were aided. The program was terminated in 1943 just as the sec-

ond federal effort, the Student War Loans Program, was well under way. In this program, juniors and seniors in undergraduate or professional training in certain science or health programs could borrow to complete their education, if they agreed to accept work in the war effort after graduation. During the two years of its operation, about 11,000 students borrowed from the program (Rivlin).

Programs for veterans

The first of the two most significant federal government programs of student aid came into being in 1944 as the Servicemen's Readjustment Act of 1944. The second program of significance, the National Defense Education Act, did not emerge until 14 years later. For veterans of World War II, the first GI Bill, Public Law 346 (there was a subsequent one, Public Law 550, for veterans of the Korean conflict), was certainly the most generous program of its kind ever conceived. It provided the veteran with an opportunity to study almost anything in college, on the job, or in schools below college level, for a period of time related only to his or her period of service. While the student veteran was so engaged, the federal government, through the Veterans Administration, paid up to $500 per year to the training agency, and to the student, a fixed monthly stipend for subsistence. No special requirements other than gaining admission to an accredited institution's programs of study and maintaining a satisfactory performance in them were required of students. During the program's existence, 7,800,000 veterans were aided by it; 2,200,000 of them attended colleges and universities. During 1947–48, it was estimated that over half of the students in colleges and universities were there under the GI Bill (Rivlin). This program was only one of five veterans' measures connected with World War II and the Korean conflict. The other important post-World War II measure, Public Law 16, provided assistance to disabled veterans. In this program eligibility was more carefully determined than in the GI Bill, and the training opportunity more closely adjusted to the aptitudes of the student and such physical handicaps as he might have. About 160,000 veterans attended colleges and universities under PL 16. It is interesting to note that 25 per cent of the veterans using the benefits under PL 16 attended colleges or universities, and under PL 346, 28 per cent.

The post-Korean War programs, PL 550, mentioned above, and PL 894 for disabled veterans, were similar in many respects to their post-World War II counterparts. However, in the case of the regular program, PL 550, monthly stipends only were paid to students, the amount varying with the number of dependents, if any. From this sum students had to support themselves and pay their college bills. This program, being less generous than the World War II GI Bill, made the lower-cost public institution more attractive to the student, and no doubt contributed significantly in the mid-1950's, to the shifting trend of the majority of students from private educational institutions to public. It is interesting to note that under the post-Korean War programs a much higher per cent of those benefiting attended higher educational institutions, 35 per cent of those veterans under PL 894 and over 50 per cent of those under PL 550. Thus far, about 1,200,000 Korean War veterans have taken college benefits under these two programs, out of a total of 2,362,000 veterans receiving some type of educational benefit (Rivlin).

In 1956, the War Orphans' Educational Assistance Program was established to provide educational assistance to the children of persons who died from injury or disease resulting from military service in any conflict involving Americans since the Spanish-Amer-

ican War. In contrast to the programs just discussed, which have just about come to an end, this program is only now beginning to grow, and it is difficult to determine what its full potential will be. During 1960, 5,381 students altogether, or 80 per cent of those receiving benefits, were attending colleges and universities under this program. Teaching, engineering, and business administration, in that order, were the most popular educational program choices (Administrator of Veterans Affairs).

The estimated average support per individual for a school year under each of these programs is as follows: PL 16 and PL 894 — $600 for tuition and $1,350 for subsistence, or a total of about $1,950; PL 346 — approximately $1,500; War Orphans' program — $1,700; and PL 550 — about $1,325. In 1959–60 the total federal expenditure for students studying in colleges and universities under these programs was estimated to have been $73,659,300. The importance of these programs as sources of student support, with the exception of the War Orphans' program, continues to diminish with each passing year because the persons eligible for them have, for the most part, used up their eligibility. These programs were for a time extremely significant in the volume of their support, and the precedent they set for government student aid in time of need will never be forgotten.

No national appraisal of these five programs has ever been undertaken. Where studies have been done they have relevance mainly for the individual institution or group of institutions in which they were carried out. It is generally felt, however, that these programs benefited higher education. There was a direct and indirect benefit to students. The high motivational tone set by older students on the campuses was welcomed by the faculties and provided a challenge for the younger students. Though institutions were forced into rapid expansion after the war to accommodate the returning veterans whose attendance was made possible by these funds, this was in the long run beneficial, since it prepared institutions for the onslaught of numbers which began hitting them in the mid-1950's. There is no question that the number of students able to obtain a higher education was greatly enhanced by the veterans' programs to the benefit of the individuals and the country as a whole. Because of low student enrollment during the war and the comprehen-

Table 2. Student assistance programs administered by the Veterans Administration

Program	*1947–48* Number of awards	*1949–50* Number of awards	*1954–55* Number of awards	*1959–60* Number of awards
Public Law 16	85,820	28,652	1,853	82
Public Law 346	1,149,941	580,597	41,987	6
Public Law 894	..	..	17,782	5,453
Public Law 550	..	..	408,893	37,730
War Orphans' program	..	..	..	7,574
Total	1 235,761	609,249	470,515	50,845

Sources: (Administrator of Veterans Affairs; Hutchins, Munse, and Booher).

siveness of the veterans' programs afterward, a sizable amount of scholarship money went unused in the colleges. However, this money was dissipated rapidly in the early 1950's and helped to ease the colleges over the difficult period when many eligible students were being drawn into the Korean conflict and the enrollment of World War II veterans was tapering off.

The succession of federal student-support programs created in the late 1940's and early 1950's for the nation's veterans brought a marked change in college-going behavior in the United States. Though the Land-Grant Act of the mid-nineteenth century seemingly established the principle of mass higher education, it was a century more before the various GI Bills accomplished this. Large numbers of students were found to be capable of doing good college work; it was also found that large numbers could be accommodated in our institutions. Though the number of college enrollees was greatly increased over previous years, these young people upon graduation, still did not fill all the nation's needs for trained manpower. From all angles, experience with the veterans' programs demonstrated that there was no merit in limiting opportunities for higher education.

National Defense Education Act of 1958

Perhaps the most significant federal effort thus far made to strengthen higher education was the National Defense Education Act passed by the Congress in 1958. There are many reasons for its significance; three, however, stand out above all others. First, there was the sheer magnitude of the program. When fully implemented, the program will have expended $2 billion of federal funds in various forms; less, however, than the various GI Bills' expenditures of about $20 billion within a 15-year period. Second, this program represents the first omnibus attempt by the government to solve or help solve a variety of problems in higher education. Usually, in the past, new federal efforts have been made one at a time and uncoordinated with existing programs. Third, the fact that the program is to work mainly through the institutions themselves assures a partnership arrangement of real interest to the colleges and strengthens a tradition of long standing.

The National Defense Education Act has five features in its program to provide for financial assistance to individuals for the payment of educational expenses, including provision for the retraining of teachers. The law established a loan program for full-time students in institutions of higher learning; a fellowship program to encourage the expansion of graduate facilities; a series of training programs, mostly in the summer, for guidance counselors; a graduate fellowship program in modern but neglected foreign languages; and a program of traineeships for school language teachers (Office of Education, *Report on the National Defense Education Act*).

National Defense Student Loan Program: The student aid feature of the National Defense Education Act having the greatest impact on higher education is, without question, the student loan program. Under it, 1,400 institutions of higher education have in the past three years loaned $202 million to over 140,000 students (Moore, 1961). These loans have been made only to needy students, the majority of whom are studying or planning to study science, teaching, languages, and related subjects. The program is administered almost completely by the institutions themselves, a practice which has advantages as well as disadvantages. Each institution participating must provide $1 for every $9 it receives from the government. Each institution must justify its need for funds in an annual application to the United States Office of Education, which administers the program.

The maximum amount an institution may receive is $250,000 per year: the maximum student loan is $1,000 per year for five years. (Only a few institutions and a few individuals have received the respective maximums which the law provides, mainly because of fund limitations.) No interest is to be charged while the student is in college or in military service. Interest charges of 3 per cent and repayment of principal are to begin one year after the student completes his education and military service. Up to 10 years may be taken to repay. Students who borrow and then enter teaching may have 10 per cent of their original loan forgiven for each consecutive year they teach, up to a maximum of five years.

The National Defense Student Loan Program virtually overnight popularized borrowing for college. Over half the colleges in the program had never had loan programs before. In 1955–56, colleges, then the chief source of loans for educational purposes, as shown in Table 1, loaned over $12 million. In 1960–61, between the National Defense Education Act loan funds and college loan funds, both loaned through the colleges, the sum had grown to $87 million, an increase of 600 per cent in five years. There isn't any question that this program stimulated a number of states to establish loan guarantee programs. It also encouraged a tremendous number of private commercial efforts. Student borrowing, prior to the National Defense Student Loan Program had generally been on a short-term basis—90 days to one year—with high interest rates, cosigners required, and so forth. The National Defense Student Loan Program changed the borrowing habits and the criteria of a good educational loan program quite markedly. The interest by students in taking loans has brought about consequent requests by colleges for funds for the loans, and the amount of money requested by the colleges continues to exceed the amount the government can supply. The colleges have adjusted to the student loan program and have met its requirements in the awarding stages with little difficulty. Because the colleges have not yet been repaid by the student borrowers, the program is as yet untested in regard to the collection of loans. Previous experience with loans of this type in the colleges, and experi-

Table 3. National Defense Education Act programs

Program	1958–59		1959–60		1960–61	
	Number of awards	Total value	Number of awards	Total value	Number of awards	Total value
Student loans	24,831	$9,502,000	115,450	$50,152,000	151,000	$73,000,000
Defense fellowships	..	..	1,000	2,332,000	2,500	5,772,000
Language fellowships	..	..	171	500,000	427	1,675,000
Guidance traineeships	..	..	2,160	1,547,000	3,170	3,960,000
Language traineeships	..	..	1,002	1,132,000*	2,130	2,406,000
Total	24,831	9,502,000	119,783	55,663,000	159,767	86,813,000

*estimated

Sources: (Hall; Office of Education, *Information concerning National Defense Language Fellowships for Graduate Students, Modern Foreign Language Fellowships, Report on the National Defense Education Act;* correspondence with Student Loan Section, Office of Education).

ence in World War II with the first federal loan program indicates that the returns on loans should run about 98 per cent, which is better than the rate of returns for most types of commercial consumer loans in our economy. But it needs to be said that collection of the loans is going to place a substantial bookkeeping and follow-up burden on the colleges for which most of them are as yet unprepared.

Loans under the National Defense Student Loan Program have been awarded by the colleges in proportion to the distribution of students in the institutions of higher education. About one-third of the borrowers have been women, who represent about one-third of the full-time students in institutions of higher education. Similarly, about 10 per cent of the borrowers have been graduate and professional students, which is about their proportion within the total student population. The average loan for undergraduates has been around $470, and for graduate students about $600. What has been very encouraging about this program is the fact that a large number of students from low-income families have been helped. The most recent study (Hall) shows the average parental income of student borrowers to be about $5,000, in contrast to the average income of scholarship holders, which is in the neighborhood of $7,500 (Moon). This certainly indicates that this program may really be moving some students into college who might not have gone, otherwise, or helping some to stay on in college, in spite of financial handicaps.

National Defense Fellowships: To increase the number of trained college teachers and to strengthen and increase graduate training facilities were the main purposes behind the National Defense Fellowships established by the National Defense Education Act. This is the first time that the expansion of personal opportunity and of facilities has been interrelated so clearly in a federal program. This program in its first year (1959-60) provided 1,000 fellowships to students in 149 institutions at a total value of $2,331,625 (see Table 3 on page 21). In 1960-61, 2,500 students in 145 institutions were receiving $5,771,731 (Howe). The amount of these awards, ranging from $2,000 to $2,400 per year, is related only to the year of graduate study in which the student is enrolled. Extra funds, depending on number of dependents, are also provided. An additional substantial grant ($2,500) is made to the institution to cover its costs of expansion.

The evidence is that this program has fostered growth in graduate training, particularly in the humanities and social studies. It has also been shown that career objectives were definitely changed and that the time necessary to complete graduate work will be substantially reduced for the holders of these awards. Most dramatic was the shift in career choices in the direction of college teaching. In the first year, 51 per cent of the awards went to those planning to teach, and in 1960-61 to 57 per cent (Office of Education, *Report on the National Defense Education Act*). As in the loan program, the institutions pick the actual fellowship winners, after the number has been determined by the government and college through negotiation.

National Defense Language Fellowships: Another graduate fellowship program established by the National Defense Education Act provides support for the study of uncommon modern foreign languages or language groups. Part of Title VI of the NDEA provides for the general improvement of language training and related research in colleges. Graduate students planning careers in college teaching in language or related fields or government service are eligible. This program requires that students devote full time to their studies. Study may be pursued during the summer, during the academic year, or both.

In 1959-60, 171 fellows received $500,000 (Office of Education, *Modern Foreign Language Fellowships*), and it has been estimated that in 1961-62 about 750 awards will be made, worth $2,798,935 (Office of Education, *Information concerning National Defense Language Fellowships for Graduate Students*). The most frequently studied languages and the number of students studying them are as follows: Arabic, 100; Chinese, 101; Hindi-Urdu, 73; Japanese, 100; Portuguese, 55; and Russian, 190. Students studying 37 other uncommon languages accounted for the rest of the group. Forty-five institutions are now providing instruction under this program. The cost of tuition plus a minimum allowance of $2,250 is provided each winner. Candidates apply through the graduate schools they plan to attend. These schools in turn forward applications and their nominations to the Office of Education where final selections are made.

National Defense Guidance Institutes: In two years (1959-61), 5,870 secondary school counselors have received training in special institutes set up under provisions of the NDEA. Most of these institutes were conducted during the summer months. Approximately 72 per cent of the total of $7,648,026 spent in that period was for stipends to enrollees and their dependents (Tyler), which amounts to $5,506,578, or a little less than $1,000 per enrollee. Counselors or teachers wishing to become counselors apply directly to one or more of the institutes for admission. The supporting stipends are paid automatically to the trainee by the institute he is attending. This program has been and will continue to be one of the most massive efforts to retrain school persons to serve a more effective role in an important educational activity in a culture which puts emphasis on college-going.

National Defense Language Traineeships: In addition to the language fellowship provisions of the NDEA, the Act provides for the maintenance of institutes, mainly in the summer, for the retraining of language teachers from the elementary and secondary schools. In the period 1959-61, 3,132 teachers received training. Assuming that about the same percentage of expenditure per individual enrollee pertained here as in the counseling program, since the stipends are the same ($75 per week plus $15 for each dependent), at least $3,538,524 can be calculated to have been spent on stipends, or just a little over $1,100 per enrollee (Office of Education, *Information concerning National Defense Fellowships; Report on the* NDEA). Here too, the students apply to the institute and receive their stipends directly from the institution.

In the year 1959-60, about $160 million was spent by the federal government for all programs under the NDEA. From this analysis, it would appear that about one-third of that expenditure ($55,663,176) resulted in direct grants to individuals for the furtherance of their educational training. What is particularly interesting to note is the diversity of student aid responsibility which this program has passed on to the colleges and universities. The loan program requires the assessment of need and the signing of a loyalty oath, and is usually administered by an officer who deals largely with undergraduate students. The regular fellowship program is probably handled in a graduate dean's office, the language fellowship by the head of one or more language departments, and the guidance and language institute awards by campus directors. Little, if any, coordination exists at this time in the colleges for this complex of awards.

Public Health Service

The federal government grants support for educational expenses to improve the health status of the nation. The Public Health Service of the Department of Health, Education, and Welfare, administers most of these pro-

grams under its National Institutes of Health Bureau. These programs, designed to train persons to become research workers, not practicing physicians, have two main objectives: (1) to increase the number of trained scientists and teachers by supporting the advanced training of individuals; and (2) to improve the quality of scientific training by providing funds for personnel and equipment in colleges and universities and other training centers. Almost all the programs are for postbaccalaureate training in universities, colleges, medical schools, hospitals, and so forth.

per year for postdoctoral awards. In 1960-61, the eight divisions of the National Institutes of Health sponsored a total of 46 different programs of student fellowship support. The total expenditure for these programs in that year was $19,835,176, providing aid to 4,205 students (Public Health Service, 1959). In addition, a program of direct traineeships, usually of one-year duration, is supported by various of the institutes. Though the 8,299 students thus aided in 1959-60 is about twice the number being aided by fellowships, the expenditure of $3,052,000 is less than one-fifth

Table 4. Aid under programs of the National Institutes of Health and Bureau of State Services

	1949–50		*1957–58*		*1959–60*	
Program	*Number of awards*	*Total value*	*Number of awards*	*Total value*	*Number of awards*	*Total value*
Fellowships	447	$1,374,000	2,320	$6,434,000	3,729	$14,841,000
Direct traineeships	..	..	7,000*	2,092,000	8,299	3,052,000
Training grants	..	..	..	..	8,000*	10,000,000
Nurse traineeships	..	..	1,000*	3,000,000	2,000*	6,525,000
Total	..	..	10,320	11,526,000	22,028	34,418,000

*estimated

Sources: (Hutchins, Munse, and Booher; Public Health Service, 1959; correspondence with Division of Nursing, Public Health Service).

Actually, one of the first government student-support programs started in the area of health sciences in 1938, and it was administered by the National Cancer Institute.

Fellowships sponsored by the various institutes in the National Institutes of Health may be for predoctoral, postdoctoral or special study work. All are directed at making full-time study possible for the recipient at an approved institution of his choice. The awards range in amount from $1,800 to $2,400 per year for predoctoral study (plus allowances for dependents), and from $4,500 to $5,500

of that for fellowships (Hutchins, Munse, and Booher).

The largest expenditure of funds by the National Institutes of Health (some part of which goes into student grants or traineeships) results from the Undergraduate and Graduate Training Grants Program. The major effort in this program is to increase and improve instruction and training facilities in educational institutions. It has been estimated that over 8,000 students were aided by this program in 1959-60, and over 10,000 in 1960-61 (from correspondence with National In-

stitutes of Health). The program, which makes grants to medical, dental, and other health science schools, also supports teachers' salaries, purchase of equipment, and so on. The total cost in 1959-60 was $73,744,000 (Public Health Service, 1961), of which possibly as much as $10 million was used for student grants by the institutions in the program.

The Bureau of State Services in the Public Health Service supports a traineeship program for nurses seeking careers in administration, supervision, and teaching. In 1959-60, $6,525,000, which would support an estimated 2,000 trainees under the terms of the program, was spent (from correspondence with Division of Nursing, Public Health Service). These funds are administered by the colleges, universities, and other schools in which the training is undertaken.

Atomic Energy Commission

The Atomic Energy Commission's first student-support program, one of the earliest federal fellowship programs, provided fellowships for graduate study in the medical, biological, or physical sciences, and ran from 1948 to 1952, when it was absorbed by the then newly created National Science Foundation. Since that time a variety of small programs has developed under the commission's auspices; most of these programs are administered directly by the Oak Ridge Institute of Nuclear Studies. Students may attend approved institutions of their choice. At present there are eight such programs, providing varying amounts of assistance to 353 graduate, professional, and postdoctoral students, with a total expenditure of $989,806. The largest of these programs provides 178 graduate fellowships, at a cost of $575,771, renewable for three years for study in the fields of nuclear science and engineering (Oak Ridge Institute of Nuclear Studies; from correspondence with the Institute). Though on the surface the aid to students by the Atomic Energy Commission seems small, it should be noted that through the commission's Contract Research Program with colleges and universities, which in 1960-61 cost about $50 million, large numbers of graduate students may be assumed to be assisted with the expenses of their education (Executive Office of the President). In the section on federal expenditures for research and development (see page 28), this subject is discussed in greater detail.

Table 5. Fellowship programs of the Atomic Energy Commission and Oak Ridge Institute of Nuclear Studies

Academic year	*Number of awards*	*Total value*
1955–56	17	$183,019
1959–60	302	782,622
1960–61	353	989,806

Sources: (Hutchins, Munse, and Booher; Oak Ridge Institute of Nuclear Studies; correspondence with Chairman of Oak Ridge Institute of Nuclear Studies).

National Science Foundation

The National Science Foundation has had a 10-year history of awarding fellowships to support a wide variety of scientific studies. The enabling legislation creating the foundation in 1950 specified three main purposes to be accomplished: (1) promote research and education in the sciences; (2) award scholarships and fellowships in the various sciences; and (3) maintain a registry of, and clearinghouse for, information about scientific and technical personnel. There is hardly a science activity in higher education today which has not been influenced positively in some way or other by the National Science Foundation. For the year 1959-60, the foundation spent

about $160 million in carrying out its main purposes (National Science Foundation, *Tenth Annual Report*); slightly over $13 million was awarded in seven different types of fellowship programs. It is estimated that an additional million was spent on these awards in 1960-61. Totally, over 4,000 students were affected, a far different picture from 1952 (see Table 6), when 642 students received about $1.5 million under the two programs which then existed.

Over the 10 years of its program of fellowships, the fairly equal distribution of awards across the major science classifications for the two programs of aid to graduate students is interesting to note. Of the 12,327 who have held awards as graduate students, chemistry was studied by 19.5 per cent, physics by 22.3 per cent, life sciences by 22.8 per cent, mathematics by 12.6 per cent, engineering by 17.1 per cent, and other fields by 5.7 per cent. In the two postdoctoral programs the distribution was similar (National Science Foundation, *National Science Foundation Fellowships*).

Graduate Fellowship Program: This program offers support to unusually able students working for master's or more advanced degrees to enable them to complete their studies as quickly as possible. Stipends range from $1,800 to $2,200 per year depending on the level of the fellowship—first year, intermediate, or terminal. In addition to these stipends, funds are provided for tuition and support of dependents.

Postdoctoral Fellowships Program: These fellowships are intended especially for those individuals who have received a doctor's degree within the past five years. The program's objective is to improve the capabilities and stature of such persons as investigators in their chosen fields of research. Postdoctoral fellows are provided with stipends at the rate of $4,500 per year ($5,000 per year for portions of tenure beyond 12 months), plus allowances for dependents, travel, and special expense.

Senior Postdoctoral Fellowships Program: Designed to enable recognized senior scientists, engineers, and mathematicians to be relieved of their normal professional responsi-

Table 6. Fellowship programs of the National Science Foundation

	1951–52		*1958–59*		*1960–61*	
Fellowship program	*Number of awards*	*Total value*	*Number of awards*	*Total value*	*Number of awards*	*Total value*
Graduate	..	$1,300,000	1,100	$3,200,000	1,537	$ 4,300,000
Postdoctoral	642	200,000	194	1,100,000	235	1,300,000
Senior postdoctoral	..	..	83	767,000	91	1,000,000
Science faculty	..	..	302	2,300,000	285	2,400,000
Cooperative graduate	..	..	1,050	3,700,000	1,100	3,600,000
Teaching assistants	..	..	580	500,000	625	600,000
Secondary teachers	..	..	628	1,500,000	324	800,000
Institute programs	..	..	..*	..*	31,000†	24,000,000
Total	..	..	..	..	35,197	37,400,000

*not available
†estimated to be the same as 1959–60
Sources: (National Science Foundation, *National Science Foundation Fellowships; Tenth Annual Report*)

bilities, this program enables them to pursue a full-time program of study to broaden their knowledge and to improve their capabilities as investigators. Tenures are from three to 24 months, with stipends of the salary-matching type not exceeding $12,000 per year. Allowances for travel and special expenses are available.

Science Faculty Fellowships Program: The aim of this program is the direct improvement of science education by providing college and university faculty members with the opportunity to improve and update their knowledge of the fields in which they have specialized (or of closely related fields), and hence their competency as college teachers. This program permits faculty members to be relieved of teaching responsibilities in order to pursue a full-time study program. Science Faculty Fellows may elect tenures ranging from three to 15 months and receive stipends on a salary-matching basis (not to exceed $12,000 per year) as of the time of application. In addition, they are provided with allowances for travel, special expenses, and tuition, if required.

Summer fellowships: New in fiscal year 1959, the program of Summer Fellowships for Secondary School Teachers of Science and Mathematics permits secondary school teachers of high ability to undertake individually planned programs of summer study to improve their subject-matter competence, and thus enhance their effectiveness as teachers. Tenures from one summer of six weeks to three full summers are available. Stipends total $75 for each week of tenure. In addition, the foundation awards cover the cost of tuition, plus limited travel and dependency allowances. This program enables graduate teaching assistants of participating institutions to devote full time during the summer to their own study and research. A summer fellow may select a tenure ranging from eight to 12 weeks, at a weekly stipend of between $50 and $75 (determined by the institution). Tuition and required fees are paid by the foundation.

Cooperative Graduate Fellowships Program: Established during 1960, this program, like the older program of graduate fellowships, has the function of offering support for predoctoral studies. It differs, however, in that the institutions themselves play a larger part in the evaluation of applicants and the administration of the program. A greater distribution of fellows among the nation's schools of graduate study has been achieved through this program. A Cooperative Graduate Fellow receives a stipend of $2,200 for a 12-month tenure. The amount may be augmented by the institution at a rate not exceeding $800 per year. In lieu of tuition and fees, a cost-of-education allowance of $1,800 is provided to the institution for each fellow. Fellows may undertake limited teaching duties as a justifiable part of their academic training.

International fellowships: The National Science Foundation also administers two fellowship programs for non-United States agencies. One, the North Atlantic Treaty Organization Postdoctoral Fellowships on Science, is to encourage the exchange of scientists among NATO nations. Forty-one of these awards were made in 1959–60, but the amounts of the awards were not reported by the foundation. A program of Senior Visiting Fellowships is also administered by the foundation for the Organization for European Economic Cooperation. Twenty-seven Americans studied for from six months to a year in 10 European countries under this program.

Institute programs: The National Science Foundation has its greatest impact upon the educational community through its many institute programs, all of which are directed at raising the level of teaching of science and

related subjects in the nation's schools. Most of these institutes are conducted during the summer, but some are full time or part time for a year's duration. During 1959-60, 649 institutes were held, and 31,000 teachers received financial assistance for attendance at them, and certainly at least the same number in the following year. Since 1953, 73,500 secondary school teachers, 5,500 college teachers, and 1,750 elementary school teachers have participated in the institute program. Stipends of $75 per week plus allowances for dependents are paid to participants. With the data on hand, it may be calculated that about $24 million was paid in stipends for the year 1959-60. In all National Science Foundation fellowship programs, except the Cooperative Graduate Fellowship Program, the foundation itself, with the assistance of panels of experts, picks the recipients of awards, who then may pursue their study interest at a recognized institution. In the Cooperative Program, NSF fellows are nominated by faculties of the various institutions offering graduate work. An effort is made in this program to spread the winners more widely. There has been in certain of the other NSF programs, particularly in the regular graduate one, a concentration of students in just a handful of institutions.

Office of Vocational Rehabilitation

The Office of Vocational Rehabilitation, a division of the Department of Health, Education, and Welfare, seeks to achieve cooperation between the federal and state governments in the rehabilitation of disabled persons so that their return to civil employment can be carried out smoothly and effectively. One of its specific functions is to provide for long-term and short-term training and instruction in technical matters related to vocational rehabilitation. To this end, a program of traineeship grants has been developed to provide for training in such fields as dentistry, medicine, nursing, occupational therapy, physical therapy, prosthetics, social work, and speech pathology. In a period of seven years, over $11 million of federal funds has gone into this one program. In 1961, 212 institutions had federal funds for this purpose, in comparison to the 60 in 1954-55 (Office of Vocational Rehabilitation).

Table 7. Traineeship grants by Office of Vocational Rehabilitation

Academic year	*Number of awards*	*Total value*
1955–56	433	$ 825,000
1959–60	1,347	2,543,000
1960–61	1,586	3,010,000

Source: (Office of Vocational Rehabilitation).

Federal expenditures for research and development

The expenditure of the federal government for research and development activities in 1960-61 was estimated to be $8,672 million. The total may grow by almost another billion by the end of fiscal year 1962. Universities and other nonprofit agencies receive about 10 per cent of this sum, the balance going to private industry. It has been estimated that probably some 40,000 university graduate students may be employed as research assistants or research associates because of federal funds allocated to the universities (Executive Office of the President). Chief among the funds which probably will supply most of these jobs will be those from the Atomic Energy Commission, the Department of Defense, the National Science Foundation, and the Public Health Service. The Defense Department, which contributed $227 million for research in 1960-

61, estimates that about 15,000 students received assistantships in the colleges as a result. The actual dollar expenditure for student-support purposes is not known. It does seem clear, though, that most of the money which goes to students supports the furtherance of scientific and technical education almost exclusively. The vastness of the sum and its influence cannot be underestimated. For example, if each graduate student who benefits from these funds received $2,000 per year (probably a conservative estimate), over $80 million would be going for this purpose. Since this represents only 10 per cent of the total sum available to institutions, it may be said with considerable conviction that this estimate is probably still very low indeed.

Reserve Officers' Training Corps programs

Aside from the support of major educational institutions for the training of military officers (United States Military, Naval, Merchant Marine, Coast Guard, and Air Force Academies), which students attend without any expense to themselves, the federal government supports officer-training programs in many of the nation's colleges and universities. Each of the three services—Army, Navy, and Air Force—provides stipends to those who are carrying advanced military training in the regular universities. Many male students, particularly those in the public institutions, are required to take a Reserve Officers' Training Corps program in their first two years of college, for which no reimbursement is given; no later military service is required, but usually some college credit is given by the institution in which the student is enrolled. There were 261,830 men taking Navy, Army, or Air Force ROTC training in American colleges in 1960-61 (from correspondence with the Department of the Army).

Certain students are selected to continue ROTC training during their last two undergraduate college years. It is during this two-year period that the student receives support both while in college, and during summer training which comes between the junior and senior years. All these students are expected to go on active duty at the time of graduation. In two years' time a regular ROTC student may receive about $650 for his participation in the program. In 1960-61 about 10 per cent of the total number of ROTC students was in the advanced programs, which meant that roughly 26,000 students received about $7,450,000 per year. In addition to these programs of the three services (of which the Navy's is by far the smallest), the Navy sponsors another program in which about 1,000 new students are picked each year to enter 52 designated nonmilitary colleges, at which a large share or all, of their expenses are paid by the Navy. In return, the student must serve four years in the Navy. At least $4 million, but probably more, may be estimated to have been spent on this program in 1960-61 (from correspondence with the Department of the Air Force; with the Office of the Assistant Secretary of Defense; with the Department of the Army).

Department of Defense

Most departments of the government have funds by which they may assist employees in furthering their education in specialities of interest or concern to the particular department. The total federal effort of this kind is no doubt sizable, but since these programs are mainly administered at the bureau or division level, it is impossible to give an accurate accounting of them.

The Defense Department has a number of programs designed to assist certain employees, members of the services, and their dependents in furthering their education and training in civilian institutions. Of course, the military supports many specialized schools, but they are not part of this analysis. In most

instances, the Defense Department pays all or most of the cost of the students' education or training. In 1956-57, $4,852,868 was spent to support academic training of military personnel at civilian institutions and another $2,094,658 was spent for the training of 24,654 civilian employees. In 1959-60, $7,233,407 was spent for about 10,000 military personnel attending civilian universities and the amount for civilians had grown to $4,320,068 with 31,296 employees involved (Hutchins, Munse, and Booher). Training in engineering, business management, medicine, biological sciences, and languages is most often supported. Students may take either graduate, postdoctoral, or undergraduate work.

Other government programs

In 1959-60, the Federal Aviation Agency spent $34,246 to assist 305 employees to obtain college-level training in technical writing, data processing, introduction to computers, and so forth. This program is 10 years old.

The Coast Guard pays the tuition for postgraduate or specialized training of its uniformed personnel in civilian institutions. In 1959–60, $94,505 was spent for this purpose. The exact number of personnel involved is not known, but probably between 200 and 300 were being aided.

The Office of Education administers a fellowship program for the study of mentally retarded children. Up to three years of study may be covered with stipends ranging from $2,000 to $2,800, depending on the year of study, plus allowances for dependents. Some of these awards are administered by states and some by institutions. In 1959-60, there were 175 of these awards which cost about $1 million.

The National Bureau of Standards has a fellowship training program for bureau personnel which provides for postdoctoral study or research assignments, institute study, and so forth. Full-time, part-time, short-term-full-time, and short-term-part-time study are permitted. In 1959-60, 231 employees received $43,470 through this program (Hutchins, Munse, and Booher).

The Bureau of Indian Affairs, Department of the Interior, administers a small scholarship program for Indian children wishing to attend colleges and universities. In 1960-61, 623 students received a total of $250,000 in such awards (Finley).

Summary of federal programs

Though only a recent entrant into the student aid field, the federal government has become a significant contributor in dollars and the major contributor to the diversity of aid. Considering this, it seems only appropriate to attempt a summary of federal activities of this kind so that the government's over-all role can be better comprehended.

Generally speaking, federal student aid efforts have been aimed at solving immediate, readily visible governmental manpower needs, or other specific, well-documented national manpower needs. But from this, one should not conclude that there is any comprehensive policy governing federal student aid efforts—there is none.

Over half of the federal funds going to the support of students are administered by institutions of higher learning. The expense of this administration to the institutions may grow to be intolerable, particularly when loan collections and cancellations are involved. Virtually no use has been made of state administrations for this purpose.

The concentration of federal funds in the sciences has not only created imbalances between science and the humanities but imbalances within the sciences, as well. For example, these funds have helped to draw the best graduate students into research and away from teaching services, contributing thereby

to a decline in the quality of undergraduate science instruction, particularly at the major universities.

There is considerable evidence to suggest that many agencies are, in view of the general nature of the programs they support, in competition with each other for the services of the programs they support, in competition with each other for the services of the same students in the same institutions. The need for greater coordination and cooperation between many of these federal agencies is obvious.

In a period of about 15 years, federal student support for undergraduates has shifted from the provision of almost complete support for over 50% of the student population (GI Bills), to a loaning of money to no more than 5% of the student population (National Defense Education Act).

Also, in the same period of 15 years the breadth of federal support for students has shifted from a neutral position in regard to the type of institutional or study program supported to a position heavily favoring science and the support of public institutions.

The breadth and diversity of federal student-support programs maintained by various units of government suggests how difficult must be their coordination within institutions. Institutions are either expected to administer the federal programs, themselves, or to work with agencies of the government in the administration of programs.

Though the total aid available to undergraduates through the colleges has been enhanced considerably by the National Defense Student Loan Program, these funds have failed to bring the nation's total aid available per undergraduate (when combined with college funds) up to the point it had reached in 1955-56.[1]

The various forms in which federal aid is provided to students suggests the philosophy, implicit if not explicit, that graduate education should be free to the individual while undergraduate education should be supported extensively by those who receive it.

Federal aid for undergraduates thus far has failed to instill any real national concern for the value and necessity for excellence in pre-college preparation while most programs at the graduate level are distinct promoters of excellence in undergraduate studies.

One must conclude from the evidence at hand that federal programs of student assistance are significant instruments of institutional as well as individual support. The reasons for this conclusion are these: the majority of funds are administered (controlled) by institutions; they grow out of specialized educational or other services of a particular institution, and in many instances make them possible in the first place; or many programs provide subsidy or over-rides to institutions which admit these federally aided students.

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[1] Rexford G. Moon, Jr., "Demand on aid funds means more planning," *Financial Aid News*, Vol. 2, No. 3, (May 1962), p. 2.

Student aid by the states

The provision for the support and maintenance of educational facilities has always been a state responsibility in the United States. Though various programs of the federal government provide support for education at all levels, most of it is administered in recognition of the final authority and responsibility of the states in the matter of elementary, secondary, and, to a considerable extent, higher education.

Even though every state provides at least some kinds of higher educational offerings at relatively low cost, and even though now well over half of the American college and university students are in such public colleges and universities, at least 35 states provide in addition some type of direct student-support program. The three main purposes of these many different kinds of programs seem to be, first, the traditional one of recruiting into or supporting students in the study of needed professions (teaching, medicine, nursing, and so forth); a second more recent purpose—to encourage students to attend private institutions to the limit of these institutions' capacities; and third, to encourage college-going among all able youngsters, no matter what their economic circumstances. In supporting this latter purpose, many of the newest programs allow students to study what they wish and attend any institution in the state.

All state-sponsored student-support programs now in existence are a product of this century, one-third enacted in the last five years, and 62 per cent since World War II. Six states—New York, California, Illinois, New Jersey, Virginia, and Rhode Island - account for the bulk of funds being provided, estimated to exceed $51 million per year.

Three distinct types of programs are now in operation. By far the largest group, in terms of dollars spent and students affected, is that which provides scholarships and/or fellowships. Eighteen states have such programs. The largest number of states, 24, provide grant-in-aid programs, mostly for veterans, their dependents, orphans, or widows. Eighteen states provide what may be called service-loan programs. These are found mostly in the low-income states (southern and midwestern) which are trying to attract teachers, doctors, nurses, and a few other professions to practice in their states. Students borrow under these programs and work off their indebtedness by engaging in the practice of their profession in the state for varying periods of time. Teaching and nursing are the professions which account for five-sevenths of the students aided by this type of program. In contrast to the federal government, where a very significant proportion of aid supports graduate or postdoctoral training, most of the funds of states are in support of undergraduate programs.

The only study of state programs ever done was undertaken by the Office of Education for the year 1958-59 (Goldthorpe). It has never been published. In that year, a total of 56,071 students received $19,898,410 in aid. The study revealed most programs to be administered by state departments of education, using funds appropriated by state legislatures. In a few instances, special offices

or commissions were created to administer these funds; or funds are dispensed by one or more of the state college or university units.

State scholarship programs

Large open-competition scholarship programs for state residents, with the exception of the program in New York State, which is the oldest (1912) and the largest (gives aid each year to 10 per cent of high school graduates of the state), are of very recent origin. Since 1955, California, Illinois, Rhode Island, and New Jersey have developed such programs. New York has also greatly expanded its own programs, and many other states have considered but have not passed legislation for this purpose. With the exception of the Rhode Island program, and a small quota in the New Jersey program, students who win these awards must attend institutions in their home state. In 1961-62, these five programs alone will have given in scholarship aid alone at least $22,789,000 to 53,711 students (University of the State of New York; correspondence with Illinois State Scholarship Commission; with New Jersey State Scholarship Commission; with California State Scholarship Commission). Two features make these programs stand out in comparison with federal programs and previous state ones. In all instances, the students' need for financial sssistance is given careful study and the size of the award has a close relationship to that need. Secondly, with few exceptions, students who win these awards may use them at any accredited college in their state and study pretty much what they desire.

State guarantee loan programs

Though a few states have supported nonservice type loan programs of various kinds for a number of years, the last five years have seen the growth of what are called State Guarantee Loan Programs. In these programs, either the state legislature or a group of private individuals puts up a sum of money to guarantee the repayment of loans taken by students, usually from banks, for their educational expenses. Ten states who already have such programs under way or who have legislative permission for the programs are: Massachusetts, Maine, New York, Rhode Island, New Jersey, Michigan, North Dakota, Wyoming, Illinois, and Wisconsin. This type of program makes loan money available to students over their own signature and at rates equal to, or lower than, prevailing commercial rates. The banks from which the student obtains the money do not require the student or his parents to provide collateral, which is the principal advantage of these programs. New York State has just converted its program so that, as far as the student is concerned, he will have the same arrangements that he would have if he took a loan under the National Defense Student Loan Program—no interest while in college, 3 per cent after college, with 10 years to repay. These loans are negotiated through either commercial or savings banks. The state pays the difference between the interest the student pays and the going commercial rate. Although these state programs, with the exception of the New York State loan plan, may not appear to be student aids in the usual sense of the word, they represent an effort to make funds available to students for educational purposes, which previously were not available, or available under much less favorable conditions.

Wisconsin's program, begun in 1933, is the oldest; since its beginning it has helped over 12,000 students. New York's student loan plan, the largest, in three years has loaned about $12 million to about 15,000 students. Information from six states where programs are operative indicates that during 1960-61 some 13,086 students borrowed about $8 million for educational purposes (correspon-

Table 8. State programs of student aid in the United States

Program	1958–59		1960–61	
	Number of awards	*Total value*	*Number of awards*	*Total value*
Scholarships and fellowships	31,756	$11,728,000	53,711	$22,789,000
Grants-in-aid	16,009	4,558,000	16,009	4,558,000
Service loans	7,413	3,283,000	7,413	3,283,000
Guarantee and other loans	7,238*	4,594,000*	13,086	8,000,000*
Total:				
(without New York State Scholar Incentive Program)	62,416	24,163,000	90,219	38,630,000
(with New York State Scholar Incentive Program)	..	..	210,219	51,630,000

*estimated

Sources: (Goldthorpe; University of State of New York; correspondence with Maine Higher Education Assistance Foundation; with New York Higher Education Assistance Corporation; with Rhode Island Higher Education Assistance Corporation; with Department of Public Instruction, Bismark, North Dakota; with New Jersey State Scholarship Commission; with Massachusetts Higher Education Assistance Corporation; with Wisconsin State Department of Public Welfare).

dence with Higher Education Assistance Foundation; with New York Higher Education Assistance Foundation; with Rhode Island Higher Education Assistance Foundation; with Department of Public Instruction, Bismarck, North Dakota; with New Jersey State Scholarship Commission; with Massachusetts Higher Education Assistance Foundation; with Wisconsin State Department of Public Welfare). This figure will probably go up quite dramatically when the no-interest New York plan becomes fully operative.

Unlike the scholarship programs and other similar award activities of states, students may borrow under these home state plans no matter where they attend school. Also, there are no restrictions on course of study, nor is need usually a primary eligibility factor.

New York State Scholar Incentive Program

Certainly the most unique state program is just now getting under way in New York State—the Scholar Incentive Program (not to be confused with the regular New York State scholarship program). Under this program, state residents attending college in the state may receive, depending on their need, the cost of the college they are attending, and their educational status, from $100 to $800 per year while enrolled. Undergraduates receive between $100 and $300, and graduates between $400 and $800 per year. It is estimated that by February 1962, 120,000 New York State college students will be receiving about $13 million under this program (University of the State of New York). The state also requires students to take an examination for this program, but this is largely a formality. Some observers believe that such a program may be the forerunner of many similar programs of the future in other states of the nation.

Student financial aid and international exchange

In recent years American colleges and universities have attracted large numbers of students from all over the world, mainly because of the status and strength of technological education in the United States. Americans, too, have traveled to other countries for an education, but in recent years, at any rate, the Americans leaving are considerably fewer in number than the students from other lands entering this country. Although the number of foreign students coming to America is sizable, we probably have the lowest number of foreign students in proportion to college enrollments of our own citizens of any major educational power in the world (Coombs).

In 1960-61, Americans studying abroad numbered about 15,000, in contrast to the 53,000 foreign nationals then studying in this country. Most Americans abroad are studying in Europe. The foreign students here come from 146 countries. In order of the magnitude of their representation in American colleges, the various areas are represented in the following percentages: Far East, 35 per cent; Latin America, 18; Europe, 16; Near and Middle East, 14; North America (other than United States), 10; Africa, 4; and other countries, 3. In this country, 50 per cent of these students are classified as undergraduate, 40 per cent as graduate, and the balance as "special."

A surprising number of the students from foreign lands report that they were supported completely by their parents and themselves, though this number is declining each year. In 1959-60, 42 per cent indicated self-support; in 1960-61, 30 per cent (Institute of International Education, *Open Doors*). There is no centralization of the federal effort in the exchange field, since many departments of government and many of the independent agencies are in some way or other involved. Most of the federal government's support of the international exchange of students is provided by the Department of State under programs conducted by the Bureau of Educational and Cultural Affairs and the Agency for International Development (AID), formerly known as the International Cooperation Administration (U.S. Congress, Committee on Governmental Operations).

The total dollar expenditure for aid to foreign nationals who are studying in United States colleges and universities is difficult to determine. In 1961, AID estimated that its average expenditure for a full-time student was $3,000 (from correspondence with AID). This is, of course, a substantial sum which certainly cannot be equaled by all sources. A sum half this size, however, would not be an unreasonable estimate of the average expenditure by all programs, public or private, for foreign students. On this basis, one could calculate that the 24,738 foreign students in America during 1960-61 known to be receiving support from government and private American sources were given *in toto* about $40,817,700.

American students abroad in 1959-60 numbered over 15,000, and they were attending 540 institutions in 63 countries. This was an increase of 12 per cent over the number of United States citizens studying abroad in 1958-59. Institutions in France, Canada,

Mexico, Germany, and Great Britain, in order of numbers enrolled, attracted over 50 per cent of the American nationals now studying out of the country. Fulbright and Smith-Mundt programs also provide for American nationals abroad. For example, between 1948 and 1958, 7,000 Americans have been aided by the Smith-Mundt program. In 1957, 803 Americans were studying abroad under this act alone (International Exchange Service). Fulbright awards, numbering about 800 new ones each year, are now available in 39 countries. The other two major government programs for American nationals abroad are the Inter-American Cultural Convention Grants, available in 15 countries, and the Scholarship Exchange Program between the United States and Ireland. The number of American nationals being aided by all programs is not actually known nor are very good estimates possible from the data at hand. Certainly the percentage aided is no larger than that for foreign nationals coming here, and is probably considerably less. If 20 per cent, or about 3,000 students were aided (and we estimate their aid to be the same as that for the foreign nationals studying here—$1,500 per year), about $4.5 million to $5 million would appear to be involved.

A number of American universities operate branches in foreign countries, most often for use of degree candidates at the home institutions in America. These home institutions will, of course, make aid available to a student who is required, or wishes, to attend an overseas branch.

At the present time in America, there is great interest in expanding the foreign student enrollment, particularly from the so-called underdeveloped countries. This is evidenced by the recent great increase in the number of students from Africa. It is still very complicated for a foreign student to communicate his abilities and achievements to American colleges, let alone to obtain financial help for his education if he does gain admission. The bettering of this situation is necessary before there is much chance of moving really sizable numbers of students from underdeveloped areas into American colleges and universities.

Scholarships and other aids provided by corporations, foundations, and civic, social, religious, and other groups

The full impact of the many and diverse noneducational, nongovernmental groups in America which provide student aids of one or more types has never been fully studied or probably even well estimated. In 1952, one study showed that there were 450 corporations sponsoring some type of student aid program, usually for scholarships (Cole). The two major agencies providing services to groups of this kind, the National Merit Scholarship Program and the College Scholarship Service, are between them assisting over 400 programs. Recent estimates (Office of Education, *Information on Federal Scholarship Programs;* correspondence with Division of Higher Education, Department of Health, Education, and Welfare) that 1,000 corporations in 1959-60 provided 37,000 scholarships worth $22 million may, if anything, be overly conservative. The book, *Scholarships, Fellowships, and Loans,* lists over 3,000 organizations giving awards, and even this listing does not include the myriad of local groups, Parent-Teacher Associations, civic and cultural groups, secondary schools themselves, and others which provide scholarship awards (Bradley).

A recent study in the state of Wisconsin (Little, 1959) showed that 40 per cent of the students on scholarship, which represented 19 per cent of the full-time enrollment in colleges of the state, had some kind of aid for at least one year from nongovernmental, noninstitutional sources. If this average holds true nationally, it could mean that at least 200,000 students were being affected each year by these many, many different programs.

A unique program, conceived in 1955 and established under a $20 million Ford Foundation grant, assists corporations and other groups to sponsor jointly a large pool of scholarships for able youngsters. Called the National Merit Scholarship Corporation, it has provided in six years about 5,000 new four-year awards ranging in value from $100 to $1,500 per year. In the current year this program will be paying out $2.8 million in the support of about 3,300 scholars in American colleges and universities (National Merit Scholarship Corporation). Students are picked after completing a two-stage testing program. In the initial testing stages each year, over one-half million youngsters are tested. This program has recruited many new corporations into the field and has had, through aiding many small programs to work together, a very real impact on scholarship ideas and practices by corporations and colleges as well as on the preparation for college provided by local schools.

According to reports of the National Industrial Conference Board (National Industrial Conference Board, Inc.), the contributions made by a sample of corporations to education has risen from 31 per cent of the total corporate contributions in 1955 to 39 per cent of the total in 1960. Of this total, 4.75 per cent was given for scholarships and

4.02 per cent for fellowships. Applying these figures to the estimated 375 million given by corporations for all purposes in 1960 (Council for Financial Aid to Education), we would estimate that about $33,750,000 was given for scholarships and fellowships. Many of these programs are directed to employees, their children, or other dependents. These programs have increased quite significantly in number over the last few years, and more programs certainly will develop as college costs continue to rise, unless a federal scholarship program is established. Then possibly this growth will stop and a number of programs will stop operating, particularly those which are not employee-orientated.

It would seem that virtually every community in which a high school is located has one or more small scholarships awarded by one or more of the civic, philanthropic, or educational groups in the community. The programs are administered in many different ways, but usually either the local high school is asked for recommendations or one of its teachers or administrators participate in the program. There are about 25,000 high schools in the United States; it would not be unreasonable to assume that there are at least as many scholarships as there are high schools. Assuming these awards to average $200, their total value would be at least $5 million per year.

Using the scanty data at present available, probably $40 million can be estimated as going into scholarships and other grants from corporations, foundations, civic groups, and labor unions. Possibly as many as 200,000 high school students are affected by these awards.

Commercial credit for education

Because of the success of the National Defense Student Loan Program, there has been in the last two years a mushrooming of commercial plans through which parents can, if they wish, fund some or all of students' college expenses. In general, these loan plans combine savings, some borrowing, some insurance coverage, and payments stretched about two years after college. There are a great many variations on these basic variables. What is accomplished by the family varies, of course, with the plan. In most instances, however, all that seems to happen is that the family is paying for college on a six (or more)-year plan in monthly installments, instead of two to four times a year, and is also paying substantial interest to do so.

Most of these plans are provided by a bank, a savings and loan association, a specially created money organization, or an insurance company, so they are therefore expensive for the family to use.

There is no agreed-upon figure which represents the amount of such credit negotiated in any one year. One organization, which is just now getting under way and hopes to guarantee loans nationally through local banks, claims that over $500 million was borrowed in 1961 from all sources for college educational expenses (United Student Aid Funds, Inc.). Assuming that the average loan was for $500, this would mean that about one million students were in part aided by borrowed money in that year, if we accept the original figure of $500 million as valid. In contrast to these figures, a study made at the University of Michigan in 1959-60 (Lansing, Lorimer, and Moriguchi) showed that about 14 per cent of the full-time college population, or 400,000 students, were aided through borrowing. At an average loan of $500, these figures would indicate that roughly $200 million was negotiated during 1959–60 for all sources. Of course, both sets of figures are open to question. It is probably safe to say that the actual figures are in between the two.

The major concern, of course, is that students and their parents, if they do borrow, should not have to pay too high interest for this service, or the cost of education to them will become prohibitive. Desirable as borrowing may be for some students, it isn't necessarily desirable that all educational expenses be financed that way. The educational community is just awakening to the problems which these loan programs can create, and may develop substitutes for them, themselves, and/or request of the government more stringent regulations on them than are now in effect.

Educators tend to look upon commercial loan programs as a convenience for students who have other financial resources, as well, but of no real help to students with great need. Commercial loans are obviously not going to attract students from low-income families in any number to college, although they may help students from more affluent families to stretch out payments.

In the commercial loan programs there is, of course, no means test of any kind required. In most instances the family's credit standing, and that alone, determines whether a loan will be negotiated or not.

The College Scholarship Service

The College Scholarship Service was created by the College Entrance Examination Board in 1954 and has given new importance to the "philosophy of need" in the awarding of student aid. The CSS provides a uniform questionnaire, the Parents' Confidential Statement (PCS), which parents and students must fill out, if they wish to be considered for undergraduate financial aid at the colleges requiring the form. There are now over 440 such colleges; in addition there are a number of outside scholarship-sponsoring organizations which require the form. The PCS form is processed centrally and the Service prepares for the colleges and sponsoring organizations an analysis or computation of the need of each candidate, following procedures agreed upon by the CSS participants. The family files only one form, indicating the colleges or other agencies offering financial aid to which copies are to be sent. A fee of $3 is charged for the first copy, and $2 for each additional copy requested. All the need calculations are done centrally by high-speed computers. About 110,000 families will file forms this year with the CSS, and each will make an average of two applications. Generally these forms, which collect a great deal of information about the finances of the family, do not serve as an application for aid, but only as a supporting document or reference to the college.

Along with furnishing copies of the PCS form, the CSS provides a variety of other services for scholarship programs run by non-college groups. Certain of the state programs use these CSS services, as do also over 200 corporations.

On behalf of its member colleges, the CSS holds meetings and provides publications and other services to aid in the conduct of aid programs in the colleges and to help the schools to understand better the many things youngsters must know in planning for college.

The CSS does not award scholarships nor are any of its computations binding on the colleges or other programs using them. It is primarily a service agency and the only policy influence it may have on education in general or its members in particular is exerted through committees of educators in whose hands the policy decisions rest. Its computation procedure for determining a student's need is the standard method used in this country (College Scholarship Service).

Summary

The total annual United States expenditure for various types of direct financial aids to assist individuals with the expenses of their education beyond the secondary school level is over $700 million a year. The agencies involved in this undertaking are many, and the types of assistance they provide, though conforming in general to the classification of scholarship (or fellowship), job, loan, and subsistence grants, are almost as many in their special variations as are the number of awarding agencies or programs.

By far the greatest dollar amount of aid seems to be directed toward easing the financial burden of the undergraduate. Over $450 million is available for undergraduate study. Although this sum appears large, the amount of money available per undergraduate student is considerably less than that available per graduate student.

Colleges and universities, state governments, many agencies of the federal government, private agencies established by the government as well as those of private origin, corporations, and civic and fraternal groups —all maintain programs of significant dollar size. In order of their importance as sources of funds for the support of undergraduate study are: the colleges and universities (scholarships and jobs), the federal government (loans, veterans grants, and ROTC), the state governments (scholarships), and private agencies (scholarships).

In order of their importance as administrative outlets for funds for undergraduates are: the colleges and universities (about 70 per cent), the federal government (about 17 per cent), state governments (about 9 per cent), and others.

Support for graduate study (part-time or full-time) is mainly in the form of fellowships, assistantships, and subsistence grants, in that order. In order of their importance as sources of funds for graduate support are: the federal government (about $200 million), colleges and universities (about $21 million), others (about $20 million), and state governments (about $10 million).

The number of foreign students coming to America with support from public or private agencies in the United States is five times the number of American students going abroad with similar support. Though the percentage is declining each year, at present about 30 per cent of foreign nationals studying in this country provide their own support.

Private sources, including colleges and universities, corporations and foundations, and special scholarship agencies, provide the predominance of scholarship funds for undergraduate study. Public sources (mostly state and federal governments) provide most of the monies used for low-interest loans as well as most of the funds which are used for the support of graduate students.

Though there are many commendable exceptions to this generalization, state and federal government student-aid support has tended to carry more restrictions (student is expected to follow certain programs of study, to take specific loyalty oaths, and so forth) than does the same type of aid when offered by private agencies.

Financial assistance of all types has gen-

Table 9. Student financial aid in the United States, admininstration and resources, 1960–61

Program and source	*Type of aid*	*Number of awards*	*Total value*	*Primary recipients*	*Administrators*
Institutional funds of 2,000 colleges and universities: Total	All types	707,846	$235,590,000	All recipients	All administrators
	Scholarships	288,521*	98,000,000*	Undergraduates	Institutions
	Loans	56,423*	14,800,000*	Undergraduates	Institutions
	Employment	347,678*	98,900,000*	Undergraduates	Institutions
	Fellowships	15,215	20,890,000	Graduates	Institutions
Federal government: Total†	All types	380,132	346,309,000	All recipients	All administrators
Veterans benefits	Subsistence	50,845*	73,659,000*	Graduates and undergraduates	Veterans Administration
National Defense Education Act					
Student loan program	Loans	151,000	73,000,000	Graduates and undergraduates	Institutions
Defense fellowships	Fellowships	2,500	5,772,000	Graduates	Institutions
Language fellowships	Fellowships	427	1,675,000	Graduates	Office of Education
Guidance institutes	Subsistence	3,710	3,960,000	Graduates	Institutions
Language traineeships	Subsistence	2,130	2,406,000	Graduates	Institutions
National Institutes of Health					
Fellowship programs	Fellowships	4,205	19,835,000	Graduates	National Institutes of Health
Direct traineeships	Subsistence	8,299*	3,052,000*	Graduates	National Institutes of Health
Training grants	Subsistence	8,000*	10,000,000	Graduates	Institutions
Nurse traineeships	Subsistence	2,000*	6,525,000*	Graduates	Institutions
Atomic Energy Commission					
Eight fellowship programs	Fellowships	353	990,000	Graduates	Institutions
National Science Foundation					
Graduate	Fellowships	1,537	4,300,000	Graduates	National Science Foundation
Postdoctoral	Fellowships	235	1,300,000	Graduates	National Science Foundation
Senior postdoctoral	Fellowships	91	1,000,000	Graduates	National Science Foundation
Science faculty	Fellowships	285	2,400,000	Graduates	National Science Foundation
Cooperative graduates	Fellowships	1,100	3,600,000	Graduates	Institutions
Teaching assistants	Fellowships	625	600,000	Graduates	National Science Foundation
Secondary school teachers	Fellowships	324	800,000	Graduates	National Science Foundation
Institutes	Subsistence	31,000	24,000,000	Graduates	Institutions

Other federal programs					
Office of Vocational Rehabilitation	Fellowships	1,586	3,010,000	Graduates	Department of H Education, and
Government research	Assistantships	40,000	80,000,000	Graduates	Institutions
ROTC	Subsistence	27,000	11,450,000	Undergraduates	Military services
Defense Department employees	Scholarships	41,296*	11,553,000*	Graduates and undergraduates	Defense Departm
Federal Aviation Agency	Scholarships	305*	34,000*	Graduates and undergraduates	Federal Aviation
U. S. Coast Guard	Scholarships	250*	95,000*	Graduates and undergraduates	U. S. Coast Guar
Mental Rehabilitation	Fellowships	175	1,000,000*	Graduates	Department of H Education, and
National Bureau of Standards	Fellowships	231*	43,000*	Graduates	National Bureau
Bureau of Indian Affairs	Scholarships	623	250,000	Undergraduates	Department of th
State programs: Total	All types	210,797	51,630,000	All recipients	All administrator
Scholarships, fellowships	Scholarships, fellowships	53,711	22,789,000	Graduates and undergraduates	States
Grants-in-aid	Grants	16,009	4,558,000	Undergraduates	States
Service loans	Loans	7,413	3,283,000	Undergraduates	States
Guarantee and other loans	Loans	13,086	8,000,000	Undergraduates	States and banks
New York State Scholar Incentive Program	Scholarships	120,000	13,000,000	Graduates and undergraduates	New York State
International exchange: Total	All types	27,738	45,818,000	All recipients	All administrator
Foreign nationals	Combination of awards	24,738	40,818,000	Graduates and undergraduates	Institutions, feder ment, and priv
Americans abroad	Combination of awards	3,000	5,000,000	Graduates and undergraduates	
Corporations and others: Total	Combination of awards	200,000	40,000,000	Graduates and undergraduates	Institutions and o organizations
Total	All types	1,525,935	716,347,000	All recipients	All administrator

*Based on 1959–60 data since later data were not available at the time this report was written.

†I have estimated that the federal government may be spending as much as $22,000,000 each year in assisting foreign nati country, and American students abroad. This sum is reflected in the total for International Exchange and to get a complete p federal effort, it should be added to the federal total.

Other federal programs					
Office of Vocational Rehabilitation	Fellowships	1,586	3,010,000	Graduates	Department of Health, Education, and Welfare
Government research	Assistantships	40,000	80,000,000	Graduates	Institutions
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Total	All types	1,525,935	716,347,000	All recipients	All administrators

*Based on 1959–60 data since later data were not available at the time this report was written.

†I have estimated that the federal government may be spending as much as $22,000,000 each year in assisting foreign nationals in this country, and American students abroad. This sum is reflected in the total for International Exchange and to get a complete picture of the federal effort, it should be added to the federal total.

erally been much less restrictive for undergraduate study than it has been for graduate study.

Most assistance, whether scholarship, job, or loan given at the undergraduate level, has stipulated that the recipient and parent must demonstrate financial need. Most assistance at the graduate level is awarded without specific reference to the individual candidate's need.

Persons desiring to update these figures or note trends for any particular period should realize that the general tendency over the last few years has been for all forms of support to increase, with one exception, that of veterans' benefits which each year decline by an appreciable amount.

Historically, the colleges and universities have played the dominant supportive and/or administrative role for all kinds of student-support programs, except for the period of about 10 years after World War II. The states were the first noncollege group to make major efforts in the student aid area; the federal government is only recently a major contributor to these activities.

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Language fellowships	Fellowships	427	1,675,000	Graduates	Office of Educa
Guidance institutes	Subsistence	3,710	3,960,000	Graduates	Institutions
Language traineeships	Subsistence	2,130	2,406,000	Graduates	Institutions
National Institutes of Health					
Fellowship programs	Fellowships	4,205	19,835,000	Graduates	National Instit
Direct traineeships	Subsistence	8,299*	3,052,000*	Graduates	National Instit
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Teaching assistants	Fellowships	625	600,000	Graduates	National Scien
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